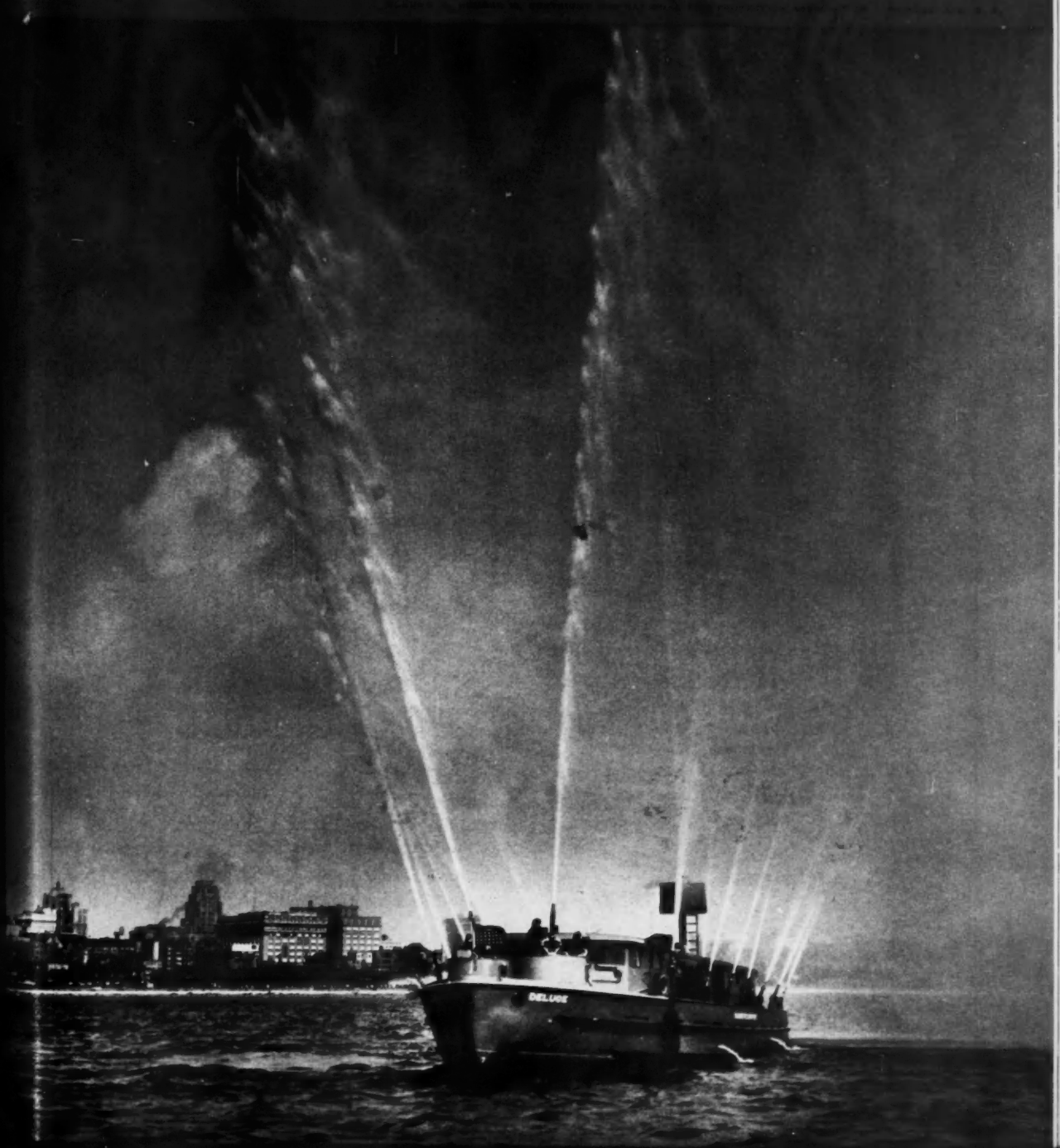
OCTOBER 1960

FIREMEN

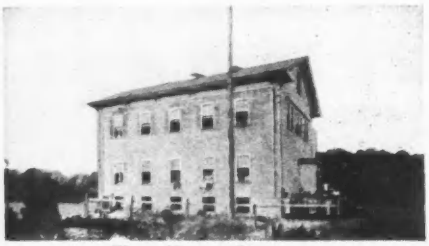
FIFTY-FOURTH YEAR • NATIONAL FIRE PROTECTION ASSOCIATION



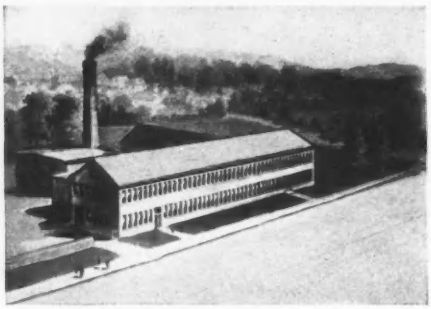
VOLUME 30 1960

LET'S LOOK AT THE RECORD...

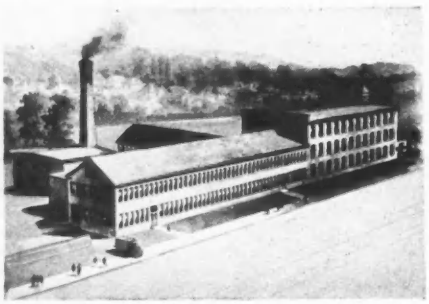
GROWTH OF THE INDUSTRY



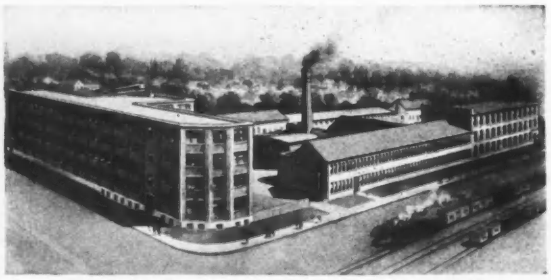
THE FIRST FACTORY
NEWTON HIGHLANDS, MASS. 1866—1885



Larger quarters became necessary and Gamewell moved into this plant capable of accommodating about 100 workmen.
NEWTON UPPER FALLS, MASS.1885—1904



The business continued to grow, and the plant was enlarged.
NEWTON UPPER FALLS, MASS.1904—1913



For protecting its own interests and those of its customers against fire, the highly fire resistive building at the left was erected in 1913, and has since housed Gamewell's manufacturing operations.
NEWTON UPPER FALLS, MASS. 1913—1949

TRADE MARK
GAMEWELL
REG'D U.S. PAT. OFF.

Manufacturer of

MUNICIPAL FIRE ALARM SYSTEMS

John N. Gamewell, after the first successful application of the Morse telegraph to fire signaling in 1851 (Boston, Massachusetts) acquired the right to use the invention and thus pioneered and assumed leadership in a new industry. The leadership of GAMEWELL in the fire signaling field has since been maintained.

Basic Principle

Wide margins of safety in operation are essential in signaling systems designed for the protection of life and property. Adherence to this basic principle has contributed most largely to the world-wide acceptance of the Gamewell fire alarm system.

World-Wide Use

Gamewell fire alarm systems, equipment and methods of transmitting fire alarms are now used in cities of the U.S.A., Canada, other foreign countries and colonies having an aggregate population of approximately —

U.S.A.	58,000,000*
Canada	4,500,000
Other Foreign Countries	17,000,000
	79,500,000

*72% of the urban population.

The Producers

A small group of highly skilled New England workers, during the past century, have continued to produce signaling equipment of such efficiency and reliability that buyers, with few exceptions, have selected the GAMEWELL system.

We invite your inquiry.

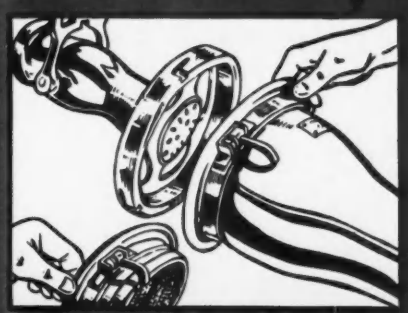
THE GAMEWELL COMPANY

Newton Upper Falls 64, Massachusetts

FAST NEW METHOD FOR EXTINGUISHING FLOWING GASOLINE FIRES

ROCKWOOD

FFF FogFOAM NOZZLES



Drawing illustrates how FogFOAM Screen can be quickly replaced with FOAM Shaper for discharging a solid stream of FOAM.

Rockwood FFF FogFOAM Nozzles are available in 3 sizes for service on 1½", 2½" or 3½" hose.

New Rockwood *Automatic* FogFOAM system specially designed for fire trucks enables you to apply FogFOAM thru Rockwood FogFOAM Nozzles to gasoline fires from fire truck as *quickly* as you can discharge water.

This remarkable FogFOAM equipment will extinguish large spill fires in gasoline with speed not possible with old style chemical or mechanical foam apparatus. It protects the firemen from intense heat and fumes. Rockwood FogFOAM equipment will also pay for itself in a few fires by the more efficient and economical use of FOAM.

Rockwood FogFOAM Nozzles used with Rockwood Automatic FogFOAM Systems give you three types of discharge: (1) FogFOAM with FogFOAM Screen (2) Long range solid FOAM stream thru FOAM Shaper (3) or WaterFOG pattern by shutting off FOAM liquid supply. See pictures at right.

We recommend this new equipment to every municipal fire department for handling the increasing hazard of large flowing gasoline fires resulting from tank truck crashes in your city streets. It also offers you the solution to the airplane crash fire hazard.

Write for complete literature and prices.

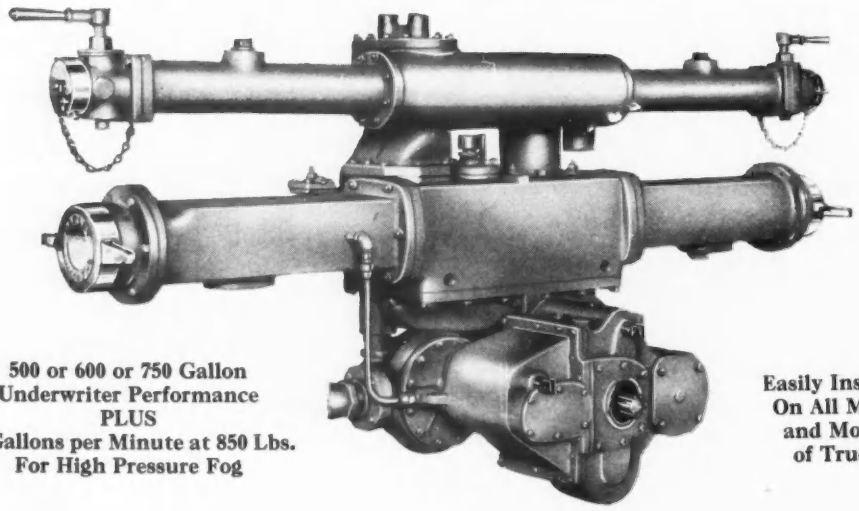
1. FogFOAM

2. FOAM

3. WaterFOG

ROCKWOOD SPRINKLER CO.
88 HARLOW ST. WORCESTER 5, MASS.
Specialists in Fire Prevention Engineering Equipment and Installation since 1907

The NEW 3-Stage DUAL SERVICE DARLEY CHAMPION Centrifugal Pump



500 or 600 or 750 Gallon Underwriter Performance PLUS 60 Gallons per Minute at 850 Lbs. For High Pressure Fog

Easily Installed On All Makes and Models of Trucks

PERFORMANCE REPORT OF ACTUAL TEST
SH500 THREE-STAGE CHAMPION FIRE PUMP

POWERED BY 140-HORSEPOWER ENGINE

OUTPUT FROM THIRD STAGE

VOLUME	PRESSURE	ENGINE SPEED
190 G.P.M.	500 Pounds	2240 R.P.M.
157 G.P.M.	600 Pounds	2350 R.P.M.
125 G.P.M.	700 Pounds	2530 R.P.M.
92 G.P.M.	800 Pounds	2700 R.P.M.
77 G.P.M.	850 Pounds	2780 R.P.M.
61 G.P.M.	900 Pounds	2870 R.P.M.

OUTPUT WITH FIRST AND SECOND STAGES IN PARALLEL AND OPERATING SIMULTANEOUSLY WITH THE THIRD STAGE

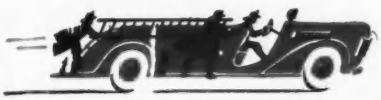
VOLUME	PRESSURE	ENGINE SPEED
65 G.P.M. (from third stage)	500 Pounds	2370 R.P.M.
500 G.P.M. (from first and second stages)	120 Pounds	2370 R.P.M.

OUTPUT WITH FIRST AND SECOND STAGES IN SERIES AND OPERATING SIMULTANEOUSLY WITH THE THIRD STAGE

VOLUME	PRESSURE	ENGINE SPEED
60 G.P.M. (from third stage)	600 Pounds	2260 R.P.M.
250 G.P.M. (from first and second stages)	220 Pounds	2260 R.P.M.

Write Today for NEW 44-PAGE Booklet of the Complete Line of CHAMPION *Fire Apparatus and Fire Pumps*

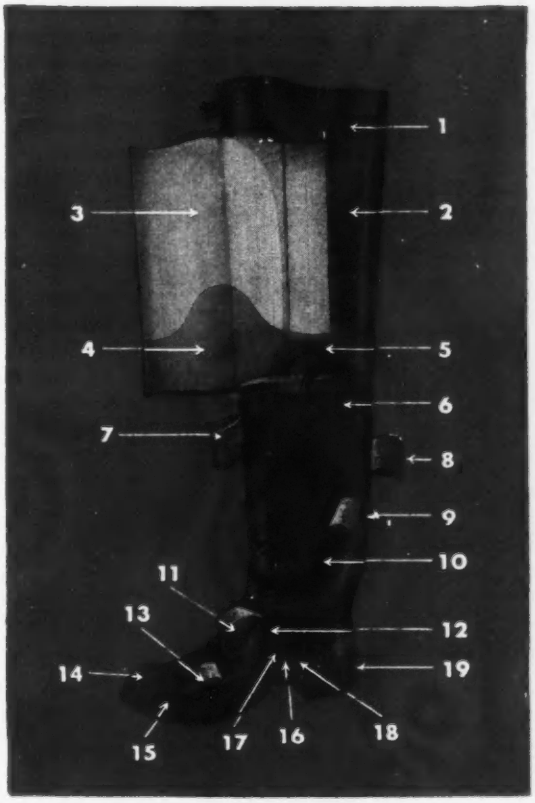
W. S. DARLEY & CO. Established 1908 Chicago 12, Ill.



SIREN

Since 1926 the registered name TOP NOTCH SIREN has stood for quality of product, and has guaranteed boot satisfaction to firemen all over the country

1. Storm King length is 3" higher than the usual, giving more protection —quick adjustment.
2. Outside, extra rubber reinforcement.
3. Net lining for ample stretch throughout the entire skirt.
4. Thick gauge inside gum knee patch of crepe rubber — prevents sharp cracking.
5. Sturdy pull-on loops, on both sides.
6. Warm wool lining throughout.
7. Special stiffening collar to make it easy to get into the boot.
8. Six plies of fabric and rubber here.
9. Seven plies of fabric and rubber here—a "shingled" construction which distributes the strain, resists snagging and gives much longer wear.



10. This entire boot is vulcanized by ammonia cure —a patented, exclusive feature.
11. Fourteen plies of fabric and rubber with special throat stay.
12. Made over a special last, fuller through the ankle and instep.
13. Nine plies of fabric and rubber at the vamp.
14. Reinforcing toe cap protection.
15. Extra thick super-quality soles.
16. Reinforced ladder shank, carefully shaped to fit the fireman's foot.
17. Warm felt lining, insole and leg.
18. Thick side guards at shank, giving protection against nail or splinter puncturing.
19. Full size heel.

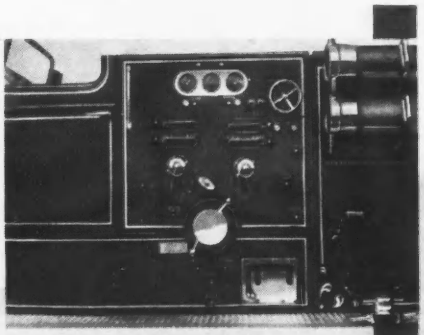
23 YEARS OF
FOOT COMFORT • SAFETY • WEAR

Sold Only Through Authorized Distributors

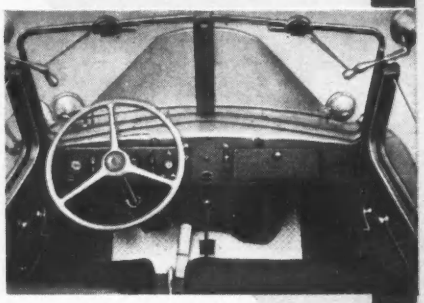
A PRODUCT OF

BEACON FALLS RUBBER FOOTWEAR

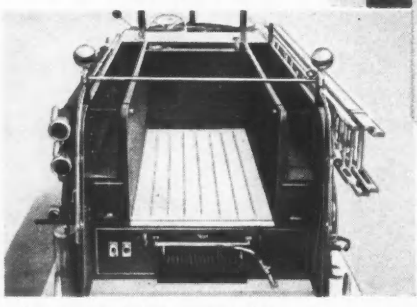
BEACON FALLS, CONNECTICUT



Mack pump controls are simple, compact, efficient. All gages, levers and connections are grouped together within easy sight and reach of operator.



Safety, comfort, convenience and visibility mark Mack driver accommodations. Note individual, adjustable driver's seat and handy, yet out-of-the-way location of parking brake.



Efficient body design assures quick accessibility to all equipment. Mack-built heavy-gage, all-steel body on Types 85 and 95 holds 1650 feet of 2½-inch hose; two side compartments hold 500 feet each of 1½-inch hose.

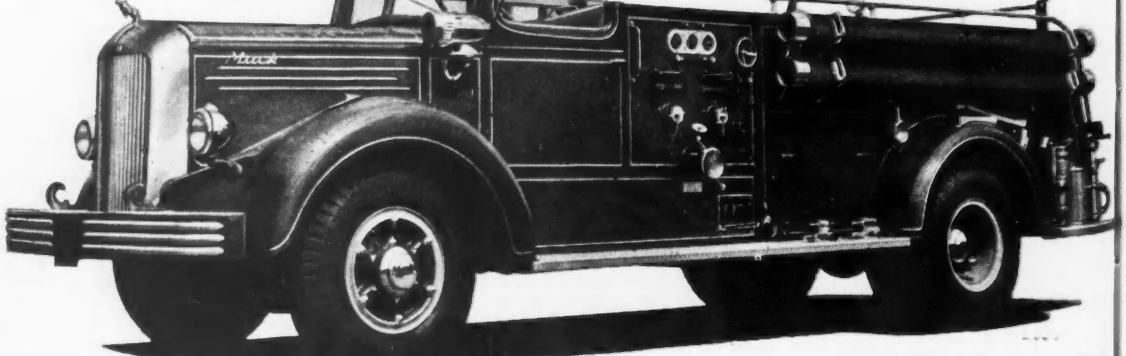
Mack Sets the Pace in Efficiency, too!

• Full fire apparatus efficiency is more than a matter of performance alone. Speed, power, pump pressures and capacities—these are important but more is needed. Skilled planning and workmanship are called for in every last detail of design.

From stem to stern, every Mack is designed and built for outstanding efficiency. Engines and pumps deliver full output without strain. Drivers' accommodations are arranged for maximum visibility, safety and ease of handling. All controls are easily reached and operated. Capacious hose bodies can be quickly packed and rapidly unloaded. Ladders and equipment are instantly accessible.

Macks set the pace in efficiency because they are the products of the greatest research, engineering and manufacturing resources in the field, with nearly forty years of uninterrupted motorized fire apparatus production. Let your Mack representative show how you get top efficiency—as well as pace-setting performance and reliability—when you *Modernize with Macks.*

Mack FIRE APPARATUS



7617

One of two Mack Type 85, 750-gallon pumpers recently delivered to Birmingham, Alabama.

Factory branches for parts and service in all principal cities. In Canada, Mack Trucks of Canada, Ltd.

Mack Manufacturing Corp
Fire Apparatus Division
Long Island City 1, New Yor

TRIPLE COMBINATION PUMPERS—500 TO 2000 GALLONS...SQUAD AND HOSE CARS...AERIAL, CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS

Firemen

Volume 16 Number 10

WARREN Y. KIMBALL, EDITOR
OWEN L. DELLA LUCCA, ASSOCIATE EDITOR
CHARLES S. MORGAN, ADVERTISING MANAGER

Published monthly for the fire service members of the
NATIONAL FIRE PROTECTION ASSOCIATION
A VOLUNTARY NON-PROFIT ORGANIZATION
60 BATTERYMARCH ST., BOSTON 10, MASS.

PERCY BUGBEE, GENERAL MANAGER
ROBERT S. MOULTON, TECHNICAL SECRETARY
HORATIO BOND, CHIEF ENGINEER

Accounts of fires appearing in FIREMEN *are copies of or extracts from reports forwarded to the Association. This Association, as a body, is not responsible for the statements or opinions of any of its members.*

Contents for October 1949

	Page
Ten Years of Progress in Rebuilding a Great Fire Department, by Francis Wornall	8
Rural Fire Protection District Embraces Three Volunteer Companies	10
Fires in the News	11
A Fire Inspector Talks to Fire Chiefs	13
Aircraft Fire Data Bulletin Issued on Boeing "Stratocruiser"	14
Civil Defense	14
Milwaukee's New Fireboat *Deluge*	16
In Philadelphia It's the *Bernard Samuel*	17
Volunteer Fire Company Section	18
North Surrey Volunteer Fire Company	18
Elevator Saved by Rexalarm and Good Firefighting	19
Michigan Fire Protection Conference	19
Disposal of Oil Spills, by Robert S. Moulton	20
Belvidere, N. J., Firemen "Pull a Fast One"	21
Radioactive Isotopes and Canadian Fire Departments	24
"Luck" in Promotion, by Charles J. Fleming	25
Coming Events	26
NFPA Regional Meetings	26
New Text	26
Outside Fire Service	27
National Electrical Code 1949	27
Iowa State Short Course	27
Manufacturers' Announcements	28, 30

THE cover picture shows Milwaukee's new fireboat "Deluge" discharging 12,000 gpm during a pumping test in Milwaukee harbor. For more detailed description see page 16.

Opening the Hydrant

As many veteran fire chiefs and instructors have often pointed out, basic rank and file training for firemen is a continuing necessity — "Firemen do not stay trained." Evidence for the need of training in even the most routine fire fighting jobs is perhaps indicated by an occurrence at a recent fire in Maine. It seems that the water pressure was low when fire destroyed a barn. Investigation showed that the hydrant had been only partially opened when the fire department arrived. The situation was further clarified when the fireman concerned acknowledged that he had never opened one of the things before.

Trick Removal?

Chief Engineer Frank Egenriether, of St. Louis, Missouri, (member NFPA), last month resigned as chief of the Fire Department in protest to a proposal by Mayor Joseph M. Darst to reduce the fire department force by 124 firemen. A fireman for 34 years, Chief Egenriether will receive a $50 a month pension in place of the monthly salary as chief of $645. After accepting the chief's resignation, Mayor Darst apparently decided that reduction in personnel was not necessary and named Battalion Chief Hugh F. Lyon, acting chief. Chief Egenriether's position was protected by Civil Service so that he could not be dismissed without cause. Thus far Mayor Darst has resisted strong public pressure for reinstatement of Chief Egenriether although reportedly willing to return the chief to the department in a subordinate capacity.

Small Mains Big Fires

At a recent firemen's training school, conducted at an eastern university, a class in pump operation was planned to include instruction in the proper use of hydrants including the limitations of small mains. However, plans went awry when water authorities insisted that the hydrants at the University on 4 in. mains were too small to supply even a single stream for instructional purposes. This, though it had been intended to limit operation to "soft suction" to retain proper residual pressure in the system.

It would appear that many hydrants near ivy covered walls have chiefly an ornamental value. It does seem strange that where it is known that the water supplies are almost useless to protect a large property (which may have a high sentimental, as well as intrinsic value) that corrections can not be made before the all too familiar words are included in a fire report, "Fire department was unable to control the fire due to low water pressure and inadequate supplies from 4 in. mains."

It frequently occurs that **after** a large institutional fire, appropriations are found to correct deficiencies in the water supply system which, if corrected in advance, could have given the fire department an opportunity to hold damage to a more nominal figure.

Even where water supplies are extremely limited, as in the case referred to, it would seem to be highly desirable to have the fire department connect to the system with a soft sleeve and see how much water might be available in event of fire. It is much better to know that the hydrant will only supply a single ¾ in. tip than to attempt to use two 1⅛ in. tips and find both streams useless. In fact, every hydrant should be the subject of a flow test by the fire department.

MAKE THIS YOUR MOST EFFECTIVE FIRE PREVENTION WEEK AND THE STARTING POINT FOR A YEAR ROUND FIRE SAFETY CAMPAIGN

Ten Years of Progress in Rebuilding a Great Fire Department

By Francis Wornall
Director of Fire
Kansas City, Missouri

ONE of my first official acts on being appointed Director of Fire was to call for a survey of the Department to be made by the National Board of Fire Underwriters. The inspection was completed and a special report published July 22, 1940, from which I quote as follows:

"Probationary substitutes have never taken an entrance examination and therefore have never been on the eligibility list."

"It is apparent that, to a large degree, other considerations than the man's ability govern the appointment of these probationary substitutes."

"Promotions have been made without competitive examinations and credit is said to have been given for seniority and record, but many letters were observed from persons outside the Department recommending that men be promoted, not only from a viewpoint of ability as a fire fighter but also from a viewpoint of political ability."

"During this inspection it was observed that proper deference was seldom shown to chief officers, salutes were half-hearted and many were only a wave of the hand; some companies came to attention when chief officers entered the station and others just looked up; in several stations the house bell had to be rung more than once to bring members to the apparatus floor. Discipline generally is not maintained at a level that would be expected in departments of Kansas City's size."

"The result of the failure to use the drill tower for three years was clearly shown by poor operation in simple evolutions conducted both at stations and at the tower during this inspection. Teamwork generally was very poor and many members apparently have not received sufficient basic training. It is also evident that company drills have not been held at quarters as many members are unfamiliar with the use of equipment carried on apparatus housed in their station and to many others, basic fire department knots are just a mystery. Among the glaring faults found were the almost universally incorrect use of tormentor poles, several members insistance that a piston pump was a centrifugal, three attempts by one company to put a booster line to work before success rewarded their efforts, stations where only one or two out of 8 members could use an all-ser vice mask correctly."

"No company or officers' schools are held."

"Discipline, which should at least be of semi-military nature in a department of this size, does not even closely approach this standard. Drills and training, which have made Kansas City's fire department famous since the days of Chief Hale, have been neglected for three years and as a result, the training of the Department is reduced to the extent that many companies go through evolutions in a manner that would not do credit to newly-appointed probationers."

Director "Brick" Wornall

There was practically no discipline. Dissension was very evident, politics was seething, drinking was prevalent. In fact, the Department was at its lowest ebb in efficiency in its history, having been the victim of the ravishing destruction of political management. It was particularly noticed on this inspection that when even a most simple practice was called for, such as tying a crowbar, an extinguisher or pike pole on a line to be raised to an upper story, no two men out of ten would do it alike and practically all of their efforts would be incorrect.

ON account of the deplorable and completely demoralized personnel, as established above, it seemed rather doubtful that the Department could ever be roused or stimulated from its depths. A start was made, however, by calling a meeting of both battalions on successive mornings, where they were informed that there would be no further politics, or political pay cuts, and that a merit system was immediately being inaugurated whereby an employee's position depended on his own individual efforts; examinations would be given for qualification in the classifications which the men were then serving, eligible lists would be established by examination, from which promotions would be made following the rule of five. (Five top names on the eligible list are submitted to fill one vacancy and promotion of one of these names is made by the Director. In case of two vacancies, seven top names are submitted and two selected; in case of three vacancies, nine top names are submitted, of which three are selected). This rule has never been violated since it was established in 1940.

Qualifying examinations were held by the Personnel Department, with weights agreed on for written and oral examinations, seniority, attendance, performance at a fire, performance at the Drill School, and delinquency or commendation records.

It was very evident from the existing acute chaotic conditions that training had to begin at once, but the instruction had to be most elementary.

The Training School was re-opened. A Drill Master, the late Chief Martin T. Gaffey, was appointed. Two Assistants, Capt. Harvey L. Baldwin and Capt. John J. Ryan, were appointed. These men were selected because of their years of service, good records and keen interest in the advancement of this Department. Simple basic standard individual and company practices were agreed on and instruction immediately begun. An average of six companies per day were called to the Drill School, three in the morning and three in the afternoon regardless of weather. All the men were trained for single company operations and multiple company operations, both pumper and hook & ladder companies. (We were then and are now operating forty first-line companies). Also, assigned to the Drill School was a first aid instructor, for it was made compulsory that every man complete both the standard and advanced first aid courses. In addition to the training of the Fire Department personnel, 120 new men were selected from over six hundred applicants, by written, physical and performance tests given by the Personnel Department, and they were put through a thirty-day firemen's basic training course in classes of thirty at one time.

As you can imagine, from June, 1940 on, our Training School was very busy, resembling somewhat a beehive. These carefully selected new men quite naturally demonstrated a quality of performance better than the average, thus stimulating the older employees to greater activity and effort.

On a company's first visit to the Training School, they were given four simple evolutions on which they were to drill in their own station houses. Most of the personnel entered into the training with the proper spirit. However, a certain percentage expressed themselves verbally as to the need for training and others demonstrated their lack of interest in training. These last two groups referred to were unfortunately unable to see that training was necessary. This viewpoint, however, was immediately corrected, for on their second visit to the Training School they were tested and graded on these first four evolutions, a grading and rating system having been

established in the meantime. They were then given four more simple standard evolutions to work with and informed that they would be graded on these at their next appearance at the school. The awareness of the personnel that a grade was being kept on their performance stimulated their interest and, with other things that have been already described, started our Department on the road to progress. Each man began to realize that his interest and performance at the Training School would have a direct bearing on his progress or advancement on the Department.

Following this beginning, Martin T. Gaffey was sent to the Fire Department's Instructors' Conference, Memphis, Tennessee, in 1941; Oklahoma A. & M. in 1941; Fire Department Instructors' Conference in 1942; Purdue University in 1942; Edgewood Arsenal in 1942; completing his Instructor's Training Course at Oklahoma A. & M. in 1942.

From August, 1940 until the Spring of 1942, the Department continued to improve gradually until we were teaching the most advanced Fire Department practices and life saving. Spirited competition arose all over the Department between individuals and companies, and many contests were held to decide the best performer. An exhibition was arranged, with some fourteen events, and shown at our Training School on two different occasions to capacity crowds. Our drill masters gained prominence and were very much in demand at fire schools in this territory.

With the war, it was quite evident that we would lose many of our young men. In anticipation of this shortage of manpower, our companies were given evolutions six months in advance how to operate as four-men companies, and then later how to operate as three-men, companies, we being fortunate, however, that all of our personnel had been trained to work either on a pumper or ladder company. Officers' school was started in the Fall of 1941 and early 1942, but naturally had to be discontinued and held in abeyance on account of the acute manpower shortage that followed. While a steady improvement had been made through training as related above, yet in early 1942, following Pearl Harbor, our Captains were assembled, handed a prepared course for auxiliary firemen's training and told they were to instruct civilians enrolled as auxiliary firemen in their neighborhood station. They were simply aghast and appaled at the idea. However, after giving them assurance that the Training School would back them up, their work began. We found, however, that the Training School telephone was ringing day and night from the officer personnel wanting to know how to teach the outlined course, the officer having found out suddenly that he was not qualified to teach. This convinced us that our Training School was not only the source of information but also had the only instructors able and qualified to teach. It was then decided that this was the wrong practice and we immediately worked for a change which was perfected some years later following hostilities. Our officers had to be schooled, so an officers' school program was outlined and started as soon as possible — November, 1945, intending to equip the officer with the information whereby he could instruct his men and accept his position as the fountain of knowledge and the leader of his men. By this time, Martin T. Gaffey, Chief Drill Master of the Training School, had received a certificate in teacher training at the University of Missouri.

The program began with the subject of:

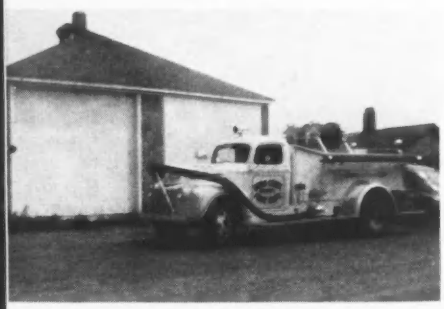
1. Leadership — by Mr. E. T. Cox, Western Actuarial Bureau, which intended to and did stimulate the officer to accept the responsibility of his position.
2. How to Take Notes — by W. D. Bryant, Head of the Department of Research and Information of Kansas City, Mo. Inasmuch as many courses were planned, we thought it advisable to give this course in order that the officers could better assemble and outline information he expected to keep in his note book.
3. Chemistry of Fire — William Larkin, Missouri Inspection Bureau, St. Louis, Mo. Elements for combustion and extinguishments.
4. Sprinkler Systems — Arthur T. Waterman, Engineer, Missouri Inspection Bureau. Fire Department necessary knowledge of sprinkler systems, shut-off valves and pumper connections.
5. Public Relations — W. A. Ross, U. S. Department of Education, Washington, D. C. How an officer of the Fire Service should deal with public.
6. Fire Department Records — M. T. Gaffey (January 15–16, 1946).
7. Supervisory Relations — M. F. Morales, Training Officer, Personnel Department, Kansas City, Missouri.
8. Human Relations — M. F. Morales, Training Officer, Personnel Department, Kansas City, Missouri. How to obtain results through people.
9. Classification of Cities — William Anderson, Missouri Inspection Bureau, St. Louis, Missouri.
10. Arson Detection — E. T. Cox. What to look for in fires of incendiary nature.
11. Mills and Elevator Fires — E. C. Harbin, Manager, Underwriters' Grain Association; S. E. Carlson, Engineer, Underwriters' Grain Association. Dangers in combat; methods in extinguishing; fire prevention inspection.
12. Your Own Water System — M. F. Hatcher, Director, Water Department, Kansas City, Mo. Explanation of structure of our own water system.
13. Rules and Regulations — M. T. Gaffey, Kansas City Fire Department.
14. Chlorine Gas — J. F. Adams, Technical Service Department, Solvay Process Company, Syracuse, New York. How to handle tanks in fires and other safety measures.
15. Fire Department Hydraulics — John Barman, Engineer, Missouri Inspection Bureau. Effective fire streams; Solid streams; Broken streams; Vapor and fog streams; Water curtains; Master streams.
16. Officers' Classes Evolutions — M. T. Gaffey (May, 1947). Refresher course on standard evolutions.
17. Breathing Apparatus — R. V. Fitzpatrick, Mine Safety Appliance Company. All types of breathing apparatus and their importance and use in fire fighting and rescue.
18. How to Rate and Grade Subordinates — Mr. Harpel, Training Officer, Personnel Department, Kansas City, Missouri.
19. Fire Prevention and Inspection — Mr. E. T. Cox. What to look for — Locating and dealing with fire hazards.
20. Teacher Training — Missouri University.
21. Advanced First Aid — American Red Cross.
22. Public Speaking — Mr. Harpel, Training Officer, Personnel Department, Kansas City, Mo.
23. Teacher Training Course — (February, 1948—) Mr. E. T. Cox and Capt. Bush Walden.

All of our officers have taken the above courses and have received diplomas for instructor training from the University of Missouri. These diplomas are signed by President Frederick A. Middlebush of the University. At a dinner, 80 officers were congratulated by the Mayor, City Council and City Manager, and were presented their diplomas by Thomas A. Brady, Vice President of the University of Missouri. The company captain is now responsible for the training and instruction of his men under the supervision of his district chief. The practices or evolutions are agreed on by all the chiefs and the instruction is carried out by the Chief Drill Master and his assistants to the captains at the Training School. Companies are only brought to the Drill School to be graded on practices they have been drilling at the station house, or to correct some discrepancy which has been noted in their performance at a fire on some standard method. Each Captain keeps a record of his training in quarters, forwarding a monthly report of the amount of time he spends on each evolution to the Training School, which has been approved by his District Chief. This gives the Drill Master a check on what to expect of each company, and any variation from the standard method as taught is directly upon the captain's shoulders.

For the past three years, it has been a simple matter to make a change in an evolution or practice. The change or practice is given to the captains, they

Continued on page 12

The Central Station at Roseville is equipped with the above 500 gpm triple combination pumper plus a chemical truck. Both trucks are equipped with mechanical foam.



The Swan Creek Community, Station No. 2, is also equipped with a 500 gpm triple combination pumper with a 500 gallon booster tank, 1000 feet of 2½-in. hose, a 200-foot skid load of 1½-in. hose, and two reels of ¾-in. hose.

This 500 gpm triple combination pumper of the Smithshire Community, Station No. 3, carries a 500 gallon booster tank. It also carries 1000 feet of 2½-in. hose and 200 feet of 1½-in. hose loaded as a skid load, as well as two reels of ¾-in. hose. Note the ample supply of buckets available to fill booster tank.

Numbers assigned to individual farms are posted on the roadside in plain view to aid firemen responding to fires.

Rural Fire Protection District Embraces 3 Volunteer Companies

IN many cases where a small community with one sma l fire company tries to awaken their rural population to the importance of fire protection they are met with little or no cooperation.

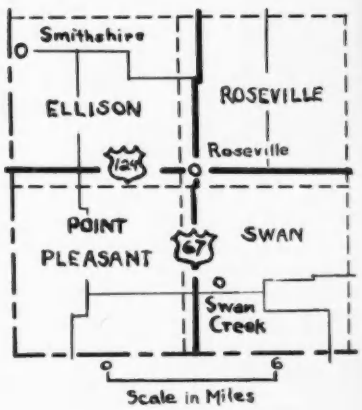
In this instance, four communities, Roseville, Swan, Point Pleasant, and Ellison, Ill., have organized into one large fire district. Headquarters is at Roseville. Consisting of these four farm communities, the fire district has gone a long ways in protecting its inhabitants. Through the media of the local newspaper, they have made the public conscious of the fire hazards to be found on farms, both year round and seasonal.

There are 610 farms in the Roseville, Swan, Point Pleasant, and Ellison Fire Protection District, and each of these has been assigned a number which corresponds to a running card on file in each station. This gives information on street direction to the farm, an outline of the farm showing gates, buildings and wells, and the sources of water, giving the total number of gallons available for fire fighting.

For the convenience of the fire department, an aluminum plate with the number is posted on the roadside in plain view in front of each farm. In case of fire, the occupant gives the number of the farm to the fire department which can readily determine what equipment is required and act accordingly.

The town of Roseville is located in the approximate center of this district, with Swan Creek (Station No. 2) located five miles southeast and the Smithshire (Station No. 3) located ten miles northwest The square outline of the district makes it ideal for systematic coverage. Each station is manned by 24 organized volunteers under the direction of a fire chief at the central staion, and a supervisor at each of the outlying stations. These in turn are under the direction of the district fire marshal, Wayne I. Green.

Drills and training periods are conducted by the fire marshal, using the fire training courses prepared by the Oklahoma A & M College, and by the Iowa State College. This training has been reflected in the small annual loss in the district for the past several years.



A running card is filled out and placed on file for each farm in the district.

FARM NO.

Owner — Tenant

Address — Township — R.F.D.

Telephone No. — Telephone No.

Route from nearest station

DISTRICT ENGINEER'S DATA

WELL or RESERVOIR	gals.	ft.
CISTERN	gals.	ft.
CREEK		
STOCK TANK	gals.	
Check.		

INSURANCE RECORD

BUILDINGS	CONTENTS
Estimated Value	Estimated Value
Insurance Carried	Insurance Carried

OUTLINE OF FARM SHOWING WELLS, GATES

FILL OUT CARD IN FULL AND MAIL TO
R. S. P. & E. FIRE PROTECTION DISTRICT
ROSEVILLE, ILLINOIS

Observe Fire Prevention Week October 9-15

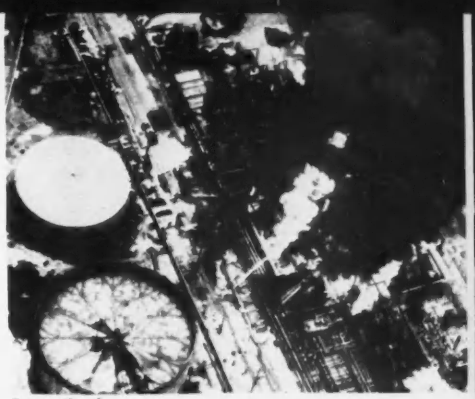
Remember: It is estimated that approximately 32 percent of the 11,000 persons killed by fire each year are farm residents, while only about 20 percent of the people of the United States live on farms.

Fires in the News

Wide World

← Clive, Iowa. Aug. 9
Fire destroyed this rural school accommodating 125 children, following summer-time repairs to the furnace.

Baltimore, Md. July 21 →
Two employees were killed and 18 others burned in fire involving four high pressure stills at an oil refinery. Fifteen water and 8 foam streams were employed by firemen and plant fire fighters.



International

Wide World

← Palmer, Mass. Aug. 10
Fire flashed through propane gas bottling plant after employees shut off leaking high pressure line to bottle filling room. Flames were shooting 100 ft. in air from two 18,500 gallon propane storage tanks when firemen arrived. Heavy streams including "jumbo" fog nozzle were used to keep tanks cool until gas burned out 8 hours later. Only small cylinders exploded. Fire spread to adjoining metal working plant. Loss: $120,000.

Acme

San Francisco, Calif. Aug. 1 →
Explosion occurred in paint factory when operator threw switch while cleaning paint mill with thinner. Fire spread to lumber and tire storage yards. Forty fire companies used over five miles of hose. Loss: estimated $159,000.

Wide World

← Des Moines, Iowa. Aug. 13
This old Coliseum used for sporting events was 275 ft. long, one equals three stories high. It was destroyed by fire starting on the stage. Delayed alarm and collapse of unprotected steel trusses contributed to quick destruction despite use of 16 hose streams. Loss: $265,000.

Wide World

Syracuse, N. Y. July 22 →
An incendiary fire started in a second floor office, spread through openings to the third floor of this theatre, store, and office building. Theatre occupants were removed safely and fire controlled with 10 hose streams.

Acme

Wide World

← Columbus, Ohio. Aug. 23
Hexane gas from a broken seal was ignited by acetylene torch used for repairs at this soybean oil extracting plant. Gas fire was too severe for steam jets and foam extinguishers but was controled by "fog," deluge sets, and foam after gas valve was closed

Mansfield, Ohio. July 25 →
Fire starting in a second floor "hobby shop" was through the roof when firemen were called at 5 A.M. The chief radioed a general alarm, en route. Nine streams confined the fire to upper floors. Loss: $83,000.

Continued from page 9

return to their companies, teach their own men, and the job is completed within a week because our captains are now able to take this assignment in their stride. The benefits from the officers' training program are increasing day by day. Learning has permeated the entire officer personnel to where each one is realizing the responsibility of the position he fills. He has been stimulated to the point where his interest in most cases is intent on surmounting his own inadequacies and shortcomings. He has a sense of abounding pride in having completed satisfactorily the courses which have been offered, something that he has never experienced before, and something which is very necessary for an officer in establishing his position in the eyes of his subordinates. He is their instructor, their leader and their Captain.

Today, and for the past several years, it is an easy matter to fill a vacancy for a district chief from the five names submitted on the eligible list. Any one of the first five could ably fill the vacancy, which makes it a very delicate decision to select one man for the job. With refresher courses and contemplated additional officers' school training, it is our ambition that the Director of this Department will be able to appoint from the eligible list, using the rule of five, assistant chiefs and the Chief, with comparative ease and the satisfaction of knowing that the man is well qualified for the job, and that the comment will not be made which I have heard so many times by probably twenty Fire Chiefs of Departments as large or larger than ours: "Director, when I was appointed Chief of my Department, I didn't have the slightest idea about what the job was like."

What we have done in our officers' training school and in the training of this Department could not have been accomplished without the intense interest and generous cooperation of the NFPA, National Board of Fire Underwriters, Missouri Inspection Bureau, Western Actuarial Bureau, U. S. Office of Education and University of Missouri. We are extremely grateful and deeply indebted to them and their most helpful representatives. Nor could it have been accomplished without the untiring, aggressive, sincere and efficient efforts of the late Chief Martin T. Gaffey, Chief Drill Master, who was completely obsessed with the desire to improve Fire Department Training. He was inspiring to our officers. His leadership is exhibited today by his former assistant, Glen R. Eikenbary, who is now Chief Drill Master, and all of the assistant Drill Masters, Chief Harvey L. Baldwin, Chief John J. Ryan, Captain Earl M. Anderson, Capt. Charles Wilhelm, and the two present Assistant Drill Masters, Capt. George H. Hillson and Capt. Harry H. Grant, who have all contributed faithfully and diligently to our training program.

Lastly, without the support, authority and confidence extended to me by L. P. Cookingham, City Manager, Ex-Mayor John B. Gage, Mayor William E. Kemp, and the members of the City Council, it would not have been possible to arrange and conduct this training program on a merit system basis.

KANSAS CITY, MISSOURI EMPLOYEE SERVICE RATING
FIRE FIGHTING DIVISION
FORM IV

NAME OF EMPLOYEE — RATING PERIOD FROM _____ TO _____

CLASSIFICATION — TOTAL SCORE _____ GRADE _____

DEPARTMENT

DIVISION

	0 . . . . 60 . . . . 70 . . . . 80 . . . . 90 100				
1. APPEARANCE	UNSATISFACTORY	OFTEN NEGLECTFUL OF PERSONAL APPEARANCE	USUALLY NEAT AND CLEAN	PRESENTS FAVORABLE APPEARANCE HABITUALLY	EXCEPTIONALLY NEAT AND CLEAN
2. PROMPTNESS IN REPORTING FOR WORK AND ATTENDANCE	USUALLY OFF WORK OR LATE	OFTEN TARDY AND OFF WORK	FAIR IN PROMPTNESS AND ATTENDANCE	USUALLY ON TIME; ABSENT OCCASIONALLY	RARELY LATE; SELDOM ABSENT
3. PHYSICAL FITNESS	SERIOUS PHYSICAL DEFECT	MINOR PHYSICAL DEFECT	NORMALLY WELL AND STRONG	ABOVE AVERAGE IN PHYSICAL FITNESS	EXCEPTIONAL PHYSICAL CONDITION
4. PHYSICAL ACTIVITY	LAZY	SLOW MOVING	NORMALLY ACTIVE AND ENERGETIC	HABITUALLY ACTIVE AND ENERGETIC	UNUSUALLY QUICK, ACTIVE AND ENERGETIC
5. ABILITY TO UNDERSTAND INSTRUCTIONS	CARRIES OUT ONLY SIMPLE DIRECTIONS	OFTEN MISUNDERSTANDS OR BUNGLES ORDERS	USUALLY ABLE TO FOLLOW DIRECTIONS	CARRIES OUT ORDERS WITH LITTLE SUPERVISION	EXCEPTIONAL
6. KNOWLEDGE AND TRAINING FOR THE JOB	FAILED TO PROFIT FROM HIS TRAINING	RETAINS A LIMITED KNOWLEDGE OF HIS TRAINING FOR THE JOB	RETAINS A FAIR KNOWLEDGE OF ESSENTIAL DUTIES OF JOB	EXHIBITS SOUND TRAINING FOR JOB	EXHIBITS EXCELLENT KNOWLEDGE AND SUPERIOR TRAINING FOR THE JOB
7. WORKING HABITS	CARELESS	LACKS SYSTEM	FAIRLY INDUSTRIOUS	SYSTEMATIC, CAREFUL, INDUSTRIOUS	OUTSTANDING
8. SKILL IN USE OF FIRE FIGHTING TOOLS	AWKWARD IN USE OF EQUIPMENT	IS NOT ABLE TO USE TOOLS TO GOOD ADVANTAGE	SOME SKILL IN USE OF TOOLS	HANDLES FIRE FIGHTING TOOLS WELL	VERY SKILFUL IN THE USE OF FIRE FIGHTING TOOLS
9. ABILITY TO STAND HEAT AND SMOKE	NOT ABLE TO STAND HEAT OR SMOKE	EASILY OVERCOME BY HEAT OR SMOKE	FAIR RESISTANCE TO HEAT AND SMOKE	CAN STAND HEAT AND SMOKE WELL	CAN STAND HEAT AND SMOKE UNUSUALLY WELL; "SMOKE EATER"
10. COURAGE	LACKS COURAGE	"SIDEWALK FIREMAN"	HAS A FAIR AMOUNT OF COURAGE AND GRIT	HAS MARKED COURAGE AND GRIT	HAS UNUSUAL COURAGE AND GRIT
11. TEAM WORK	NOT A GOOD TEAM-WORKER	DOES NOT ALWAYS COOPERATE	GOOD TEAM WORKER	ALWAYS COOPERATES, WORKS WELL WITH OTHERS	DEMONSTRATES LEADERSHIP

Reproduction of front of 8½ x 11 in. merit rating sheet compiled every six months for fire fighters, fire motor drivers and fire motor driver engineers of the Kansas City Fire Department. On the back side of the sheet are additional questions covering such subjects as: composure at scene of fire, judgment and ability to appreciate situation, willingness to accept responsibility, work attitude, ability to get along with other firemen, initiative, self-improvement, mental reaction, and capacity to develop. There is also information as to how to properly mark the service rating and a general report regarding the employees' ability in relation to other employees. Another rating form is also provided for use in connection with officers and persons employed in a supervisory capacity, and another for administrative office employees, fire prevention inspectors and repair shop employees.

Additional Training

In addition to training our own personnel, our Training School has been particularly active in giving Fire Prevention courses to key personnel, such as supervisors and managers of industry and business. The objective is to teach the supervisors and managers so that they in turn can instruct their own personnel. One 20-hour course was held for the Hotel Owners' Association, 40 in attendance, the course consisting of:

1. Use of Fire Fighting Equipment
2. Inspection and Maintenance of Fire Fighting Equipment
3. Inspection of Premises to Eliminate Fire Hazards
4. Fire Brigade Organization and Equipment
5. The Evacuation of Personnel in Emergency
6. Use of Fire Brigade Equipment

This same course was given to employees of large manufacturing concerns, 40 in attendance.

Another 20-hour course on Fire and Panic Control was given to representatives of mercantile and warehouse establishments. Subjects taught were:

1. Chemistry of Fire
2. Fire Extinguishers and Fire Extinguishment
3. Panic Control and Fire Inspection
4. Salvage Operations

Continued on page 22

A Fire Inspector Talks to Fire Chiefs

From an address "Coordinating Our Work" by Captain L. M. Bowman, Fire Prevention Division, Bureau of Fire, Richmond, Virginia, before the State Fire Chiefs Association of Virginia at Farmville, August 15, 1949.

WHEN I was asked to utilize this period it was suggested that I might select my subject. My first reaction was to go down the line on fire prevention for two reasons, first, that is my work and a subject I enjoy discussing, second, it would simplify my preparation. However, further consideration directed my thinking toward the need for effective cooperation in the several branches of the fire protection service. Before making the final decision I looked up the word coordinate and among other definitions I found this one, "To cause to work smoothly" that coincided with the thought I had in mind and appealed to me as a subject that deserved a place in this program.

In thinking of coordinating our work our thoughts turned first to, what is our problem? What prevents our department from running smoothly? Is it the fault of the chief because of the unique position he finds himself in when he is exalted to that high office? I am thinking, of course, that frequently he is placed in this position, assuming responsibility but without power to make organizational changes, or to introduce new ideas due to precedent, governmental set-up or politics. Or do we have factions in our department with each one attempting to gain power and influence at the expense of the other? Also, we may have a person in charge of the fire prevention division that is not cooperative.

Now we turn from, what is our problem, to, what is our objective? What is our goal or what do we expect to accomplish? You may immediately answer that in your own mind with these words, **"preservation of life and protection of property."** That is a logical answer. I believe every Chief here is fully aware of his responsibility to his community. You are cognizant of the fact your people rightfully expect you to protect their lives and property from death and destruction by fire. It does not matter whether you are paid and delegated with the responsibility or if you have volunteered your services and accepted the challenge, you still are expected to provide reasonable care and protection for Mr. and Mrs. John Q. Public.

In providing this protection we find there are two major phases of our work that we should consider. One is **prevention** and the other is **extinguishment.** Although prevention and extinguishment are both services usually rendered by the personnel of the fire department, there are still some people who would have us believe that there is a wide abyss separating one from the other. I will admit that there is a vast difference between the position of the inspector who finds himself cornered, due to lack of authority, experience or backing, and who must use all the diplomacy he can possibly command if he is to accomplish his purpose; and that of the fire fighter who arrives at the scene of action amid noise, glamor and excitement, and who by virtue of his position is in command of the situation. But gentlemen, that does not alter the picture. It only reflects more clearly that these men with diverse responsibilities have as their ultimate aim or objective; preservation of life and protection of property.

I am convinced that fire prevention is the heart of our fire service and from this vital organ the blood of protection must ebb and flow if we are to successfully coordinate our efforts against this common enemy — fire. You may desire to take issue with me since most fire prevention divisions are small compared with the fire fighting departments. However, the analogy here implied is logical reasoning. Our hearts are very small when compared with our bodies but we are ready to admit that when it gets out of adjustment smooth running ceases to be a reality. You may say, Bowman has a bad case of prevention fever, or he has been in the game so long he has developed a one track mind and can think only in terms of fire prevention. I am willing to admit that we are prone to channel our thinking and I also believe this applies to you as chief of your department. Unfortunately most of your energy and efforts necessarily are directed along the line of fire fighting, acquiring apparatus and the one hundred and one other duties you are called on to perform. Therefore it is easy to understand why you may often think in terms of **fire fighting** rather than **fire prevention.** We must have our fire departments to extinguish fires that start from arson, lightning, carelessness, indifference, ignorance and any other cause. However, we do not want to overlook the fact that **most of the people who lose their life due to fire die before the department arrives.** How are we going to save these lives unless inspections are made and adequate safeguards provided before the fire occurs?

In some of our larger cities we have men assigned to full time work as inspectors. In other communities the members of the fire fighting forces do all of the inspection work. In Richmond we have a Fire Prevention Division which is a division of the Bureau of Fire. Twelve years ago when I was transferred to this department our men did all of the inspection work. Now our work has become specialized to the extent that we are no longer able to make routine inspections. The men in the various companies are required to inspect their respective districts.

If, due to your special love of fire fighting you, as chief, are inclined to favor that phase of the work you may have a tendency to neglect fire prevention, investigation, maintenance or any other activities of your department. The men under your command, if they are loyal, will very soon sense your feeling and in their desire to please will play up the part you are interested in with the result that your program gets off balance. If the hub gets out of line, slightly to the left or right, the inevitable result will be friction, lost motion, inefficiency and an upward trend in fire losses.

If your set-up includes a special group of men assigned to full time fire prevention work I believe it may be well for us to ask ourselves a few questions for the purpose of getting a little clearer focus of the picture so we may pick out a few bugs that are hiding in the fog.

Are these men who are assigned to this particular work being pushed off in a small corner and made to feel that their work is secondary in importance?

When problems concerning the fire department as a whole arise, are these men consulted?

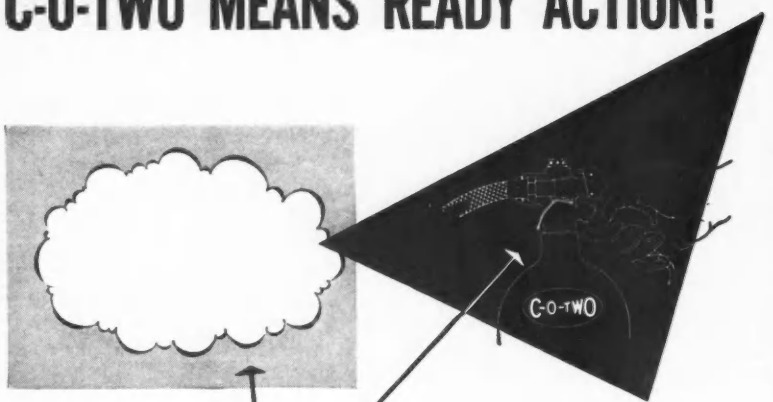
Is there reason for them to feel that they are relinquishing their chances for promotion?

Are they supplied daily with a report of fires that occurred the previous twenty-four hours so they can investigate and study causes to better prepare themselves for their work?

Are you requiring these inspectors to supply your office with comprehensive reports so that information such as: the location of explosives, storage of flammable liquids and other highly combustible materials, factories involving unusually hazardous processes, conditions which may be extremely dangerous for fireman during fire fighting operations, building in which large numbers of people assemble or sleep or any other similar important facts that you

Continued on page 14

C-O-TWO MEANS READY ACTION!



CARBON DIOXIDE + SQUEEZ-GRIP* VALVE

you get QUICK, POSITIVE fire protection

When you release carbon dioxide from a C-O-TWO* Squeez-Grip* Portable Fire Extinguisher . . . just squeeze lever to open . . . release to close. The Squeez-Grip* Valve operates as fast as you can open and close your hand . . . the greatest single contribution to the releasing of carbon dioxide from portable fire extinguishers.

C-O-TWO* is carbon dioxide . . . kills fire in seconds . . . harmless to materials and equipment, even food. It is clean, dry and odorless . . . non-deteriorating and non-conducting . . . highly effective on flammable liquid and electrical fires . . . leaves no after fire mess.

C-O-TWO* makes a complete line of fire protection equipment . . . carbon dioxide hand and wheeled portable fire extinguishers, carbon dioxide hose rack and hose reel fire extinguishing units, built-in carbon dioxide fire extinguishing systems and built-in smoke and heat detecting systems . . . approved by Underwriters' Laboratories, Inc., Factory Mutuals and Government Bureaus.

Let an expert C-O-TWO* Fire Protection Engineer help you in planning complete up-to-date fire detecting and extinguishing facilities for your property now, before fire strikes. Write us today for complete information.

*T. M. REG. U. S. PAT. OFF.

C-O-TWO

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

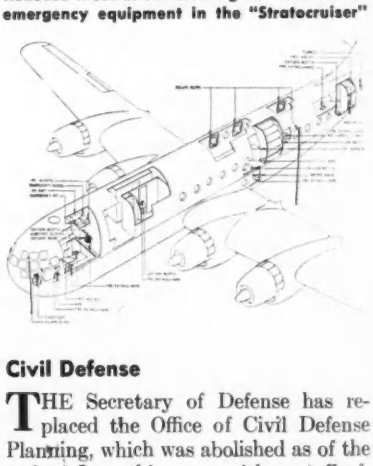
AFFILIATED WITH PYRENE MANUFACTURING COMPANY

Aircraft Fire Data Bulletin Issued on Boeing "Stratocruiser"

THIS new bulletin will be of great interest to the fireman that would ask himself what he would do if he had to fight fire aboard Boeing's latest commercial airliner, the "Stratocruiser." Prepared by the NFPA Committee on Aviation by the NFPA Committee on Aviation and Airport Fire Protection, this 16-page "Bulletin No. 37" contains 28 photographs and charts designed to inform firemen and aircraft personnel of the layout of this 142,000 pound 80 passenger aircraft, including the location of fuel tanks (7,790 gallon capacity), access entries, emergency exits, and the fire protection including both detection and extinguishment systems.

A very valuable addition to your fire department library, this bulletin is available at $1.00 each, from the National Fire Protection Association's Executive Office, 60 Batterymarch Street, Boston 10, Mass.

Reduced illustration showing the location of emergency equipment in the "Stratocruiser"



Civil Defense

THE Secretary of Defense has replaced the Office of Civil Defense Planning, which was abolished as of the end of June this year, with a staff officer who is to be Assistant for Civil Defense Liaison. Lt. Col. Barnet W. Beers, who was Executive Assistant of the Office of Civil Defense Planning, will hold the new position.

The new liaison system will provide a central source of technical information, advice, and assistance on civil defense matters to the national military establishment and handle liaison with other governmental and private agencies handling any detail of civil defense planning.

A Fire Inspector Talks to Fire Chiefs

Continued from page 13

and the officers in charge of companies should have?

If your department is to operate smoothly and efficiently many of these things must receive their proportionate share of consideration.

If you happen to be chief of a depart-

ment in which all inspection work is done by the members of the various companies, you will find the problems very much the same, however, your approach may be different. One of your major problems will be the selection of qualified men to do the job. They may be selected for their interest in and knowledge of fire prevention, but special consideration should be given to their ability to carry out their work without causing friction in their company.

Coordinating our fire fighting and fire prevention work as I see it resolves itself down, to first, planning our work, and second, working our plan. Planning means more than just sitting down and outlining to your subordinates a job you want done. It should start with a very careful study of your community and its needs for protection of life and property against fire. I believe the chief that can get all the things he needs may be placed in the same classification with the "Dodo bird," he no longer exists, so the basis on which we must work, after we have analyzed our needs, is to put first things first. Once you have a reasonably clear picture in your mind of the things you believe your department can accomplish, then call in your key men and present the picture to them. These men should be a representative group of the different phases of the department's work. Present your picture with clear convincing explanations, observe their reactions, agree with them if possible. Don't take the position that your way is the only way. You too can be wrong. Keep wide open for suggestions. Provide logical reasoning on points of difference and above all instill in them a deep sense of responsibility and teamwork.

Working your plan will depend to a large extent on your ability to sell it to the men across the table. There will always be different opinions. We should be grateful for that because it stimulates thinking and brings in fresh ideas, but it is highly desirable that you have your plan approved insofar as possible by the men you must depend on to do the work. Your officers must sell it to the men they command. Unless the officers believe in the thing they are selling and can convince their respective companies of its importance you may find some rough traveling ahead.

In the final analysis your success may depend on just how effectively you can cause your organization to work smoothly. The men down the line are going to carry the ball, but the plan of attack and the calling of the signals will rest squarely upon your shoulders. Each man on your team is but a small cog in a big wheel. If this wheel is to run smoothly without friction and lost motion it must be lubricated with wisdom, diplomacy and leadership, emanating from the chief of the department.

Metcalf

TRADE MARK REG. U.S. PAT. OF

UNIFORM
FABRICS

Standard fabrics for over eighty years

SPECIFY
386
AND OTHER STANDARD
NUMBERS USED BY
FIRE DEPARTMENTS OF
LEADING CITIES

★

Sample Brochure Upon Request

METCALF BROS. & CO.
45 EAST 17TH STREET
NEW YORK CITY

Milwaukee's New Fireboat "Deluge"

THE Milwaukee Fire Department, under Chief Edward E. Wischer, this summer placed a new Diesel-powered fireboat *Deluge* in service. The boat's 12,000 gpm pumping capacity is said to be exceeded only by New York City's 22,000 gpm *Fire Fighter*.

The *Deluge*, designed by naval architect A. M. Deering of Chicago, has an overall length of 96 ft. 7 in., beam of 23 ft., and draft of 6 ft. 9 in. It was designed with low superstructure so that it can pass under the numerous bridges and viaducts it will encounter in service.

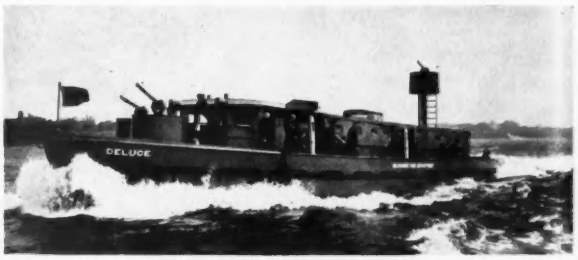
The vessel is equipped with four double suction, single-stage centrifugal pumps, each rated at 3000 gpm. Milwaukee fireboat pumps also are used to supply separate high pressure fire mains which extend from the Milwaukee River

The new *Deluge* replaces a steam driven *Torrent* built in 1910 and obtained second hand by Milwaukee in 1922. A 9000 gpm fireboat built in 1903 will be kept in reserve.

Among the many advantages claimed for the Diesel-powered fireboat are lower fuel cost, quicker response to fire alarms, greater maneuverability, proved uniform pressure of Diesel engine driven centrifugal pumps, elimination of the smoke nuisance and less manpower required to man the *Deluge*. Chief Wischer reports that over a period of six years, the cost of operating the steamboats, including crews, fuel and boat maintenance, was $624,887. During this period only 33 hours and 17 minutes were spent in fighting fires.

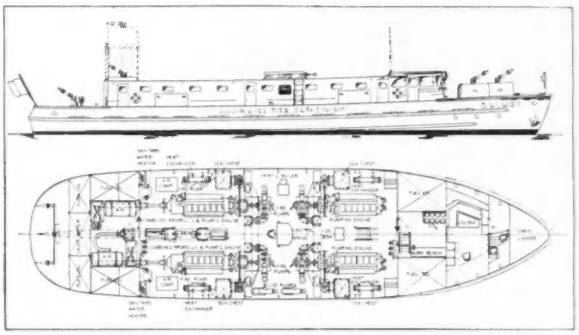
Cost estimates made on the operation of the *Deluge* and cost reports received on the operation of other Diesel-powered fire boats indicate that the *Deluge* can be operated at not more than 10 percent of the steamboat costs. This 90 percent savings does not take into consideration additional savings that will be effected by the reduced crew requirements. The Milwaukee steam fireboats required a crew of 20 men working in three shifts for each boat. With the Diesel boat, crew requirements are reduced to 17 men resulting in a saving of $11,180 annually.

All the equipment in the *Deluge* is in duplicate permitting the boat to provide about 75 percent service even though one unit of each type is out of commission. The boat has twin four blade, 40 in. diameter, bronze propellers, twin propelling engines, twin pumping units, etc. Each of two troughs supplies water to suction of two of the four main pumps, which in turn move the water in risers to the main loop situated in the upper engine room. Each monitor draws from the main loop.



Nordberg Mfg. Co. photos

Two Nordberg four-cycle, six cylinder Diesel engines operating at 600 RPM give a speed of 11 knots. There are two Akron Brass monitors forward, one aft, and one monitor on a telescoping tower which can be raised 21 feet above water line in 45 seconds by hydraulic lift. There are seven 3-inch discharge outlets on each side.

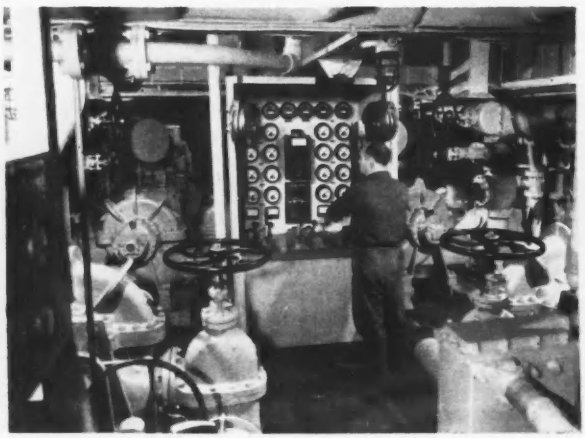


Outboard profile and engine room arrangement of the "Deluge."

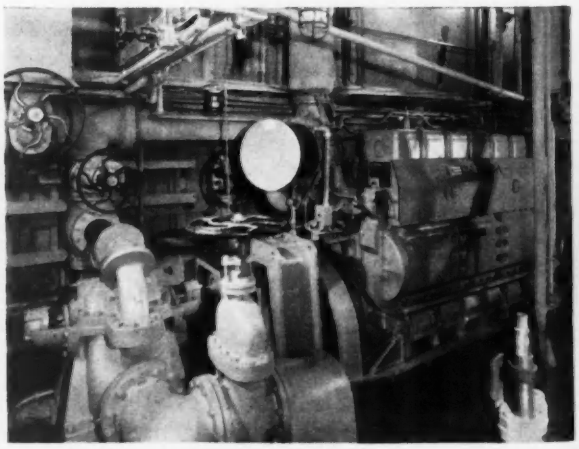
Except for a lounge forward with toilet and shower there are no quarters provided for the crew. Following common fire department practice, the boat is considered in the same category as a pumping engine and her crew is berthed in a shore firehouse.

The fireboat has two-way radio communication. When at its berth it has a connection for fire alarm telegraph register and fire alarm telephone aboard

The *Deluge* has two 300 gpm bilge pumps and a 100 gpm ship's fire pump. To combat shipboard fires, the *Deluge* carries a bank of eight portable 75 lb. CO_2 bottles connected into feed lines distributed to nozzles throughout the ship.



Pumps and pumping control station in engine room of "Deluge," showing at left and right four Allis-Chalmers single stage pumps each rated at 3000 gpm at 150 pounds.



One of four 4-cycle, six cylinder Nordberg Diesel engines, each rated at 375 HP. Two of the engines may be used for either propulsion or pumping and two for pumping only.

In Philadelphia It's the "Bernard Samuel"

AFTER the war the Philadelphia Bureau of Fire found itself with three aged steam fireboats, costly to maintain. Following a conference with representatives of the National Board of Fire Underwriters, it was decided to build a small speedy Diesel-powered fireboat of about 6000 gpm capacity.

Naval architect Thomas D. Bowes was successful in concentrating in a motor vessel only 75 ft. long, the following characteristics:

1. Pumping capacity close to 6000 gpm at 150 pounds.
2. Small size and strictly functional design.
3. Simple machinery and equipment for operation by a small crew.
4. Single screw to reduce possibility of damage from debris or ice.
5. Design to meet ice conditions.
6. Large trim tanks to permit reduction in draft for penetration in shallow waters and to increase draft for towing.
7. Welded steel construction.
8. Maximum propulsion and pumping efficiency by the same power plant.

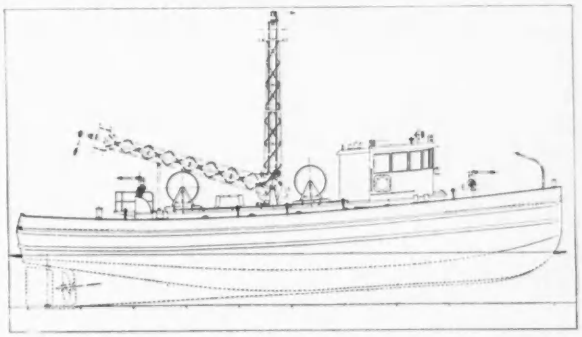
The ship's small size and versatility can in a great measure be attributed to her compact power plant consisting of an 800 hp GM, series 71, quad-6 Diesel engines, made up of four, six-cylinder engines mounted on a common base. Due to the fact that the engines can be independently declutched and turned to pumping, if the need demands, it was only necessary to install one power plant to handle both pumping and propulsion. Four DeLaval pumps have been provided, each having a capacity of 1500 gpm at 150 pounds, and operating at 1800 rpm. One operator can control the complete engine and pumping operations. In case of damage to any pump or its valves, it can be cut out without interfering with the functioning of the others. There are two sea chests, one port and one starboard. They are so piped that either can supply the four pumps.

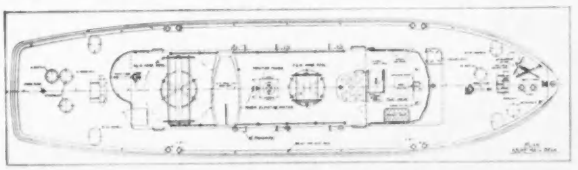
On deck there are three fire monitors of 1500 gpm capacity, in addition to six 3½ in. outlets capable of supplying 12 2½ in. lines of hose. The fire tower elevating gear is electrically driven and will stay at any angle of elevation when the electrical power is shut off.

Continued on page 22

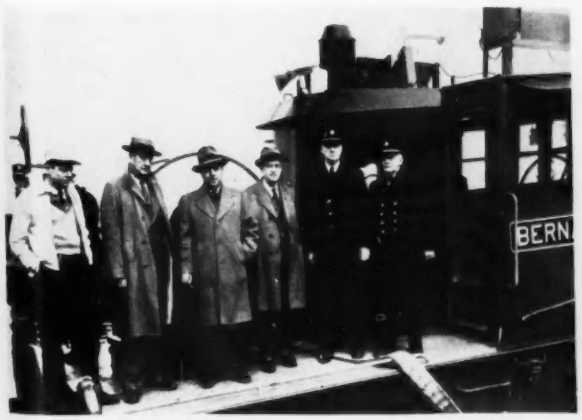
photos, plans and functional data courtesy General Motors Corp.

The "Bernard Samuel" underway at 17 knots throws better than 5000 gpm through her three monitors.

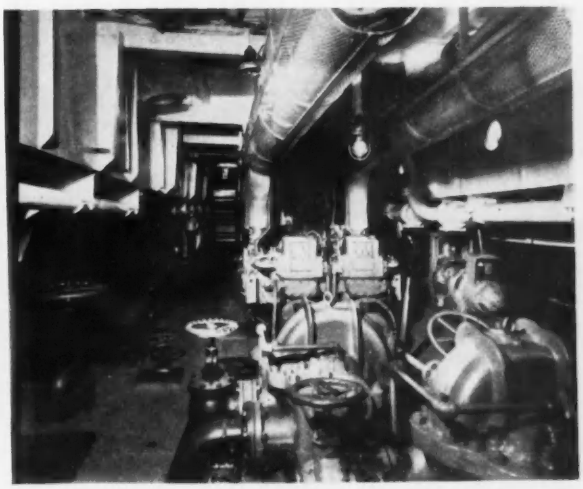




Plans of the "Bernard Samuel" showing location of monitor nozzles and reels for both 2½ and 3½ in. hose. Each reel holds 1000 ft. of hose.



Aboard the "Bernard Samuel" during trials were: (left to right) Edward G. Brownlee, Vice President R.T.C. Shipbuilding Corp., Police Inspector Howard M. MacBride, Department of Public Safety, City of Philadelphia, John P. Carson, President, R.T.C. Shipbuilding Corp., Thomas D. Bowes, Naval Architect, Designer of the vessel, John C. Cost, Chief Engineer, Philadelphia Bureau of Fire, Pilot Harry Artis, Captain of vessel.



Engine room of the "Bernard Samuel" from forward and showing arrangement of GM Quad-6 Diesel main power plant with two DeLaval centrifugal pumps in the foreground.

They've switched to

CIRCUL-AIR

THE AIR CONDITIONING
FIRE HOSE DRYER

Augusta, Ga. • Allentown • Albany Boston • Benton Harbor • Beaumont Burlington • Chicago • Columbia, S. C. Columbus • Cedar Rapids • Erie Detroit • Galveston • Greenboro Kalamazoo (TWP.) • Lake Charles Louisville • Jackson • Memphis Milwaukee • Montreal • Newark Oklahoma City • Omaha • Oshkosh Providence • Rochester • Racine Seattle • Shreveport • Santa Fe Sao Paulo (Brazil) • Santa Clara (CO.) Toledo • Twin Falls • Trenton Winnipeg • Watervliet • Wyandotte

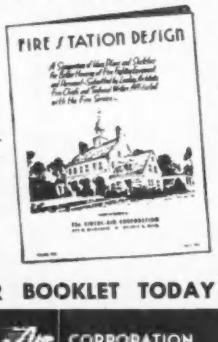
Yes — all these and hundreds of other highly rated fire departments have found CIRCUL-AIR their **complete drying service.** Many of these towns are repeaters — ordering for additional stations after an initial installation proved the merit of this modern dryer. You, too, will find it . . .

- **Dries hose in a few hours**
- **Saves space — fits in any corner**
- **Keeps all hose ready for service**
- **Makes good hose last longer**
- **Reduces new building costs**
- **Improves station design**
- **Dries fire clothing, too**

PATENTED

NEW FIRE STATIONS?

Send for our new 36-page free booklet showing floor plans and perspectives of 34 modern stations; also editorial material by architects and foremost writers of the Fire Service.



WRITE FOR BOOKLET TODAY

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Street
DETROIT 2 • MICHIGAN

Volunteer Fire Company Section

Membership in the NFPA Volunteer Fire Company Section costs $12.50 per year. This includes 10 subscriptions to FIREMEN. Additional fire fighters may be enrolled to receive FIREMEN at $1.25 each. Other NFPA members will be sent FIREMEN on request.

AT the present time, the Volunteer Fire Company Section of the National Fire Protection Association boasts of a membership of 1,370 fire companies with 20,806 firemen receiving the valuable information that is made available to them in FIREMEN each month.

New members of the Volunteer Fire Company Section for this month are:

Columbia Fire Dept., Columbia, Mo.
Hanover Vol. Fire Dept., Hanover, Ill.
Lutcher Vol. Fire Dept., Lutcher, La.
Norris Vol. Fire Dept., Norris, Tenn.
Nyssa Vol. Fire Dept., Nyssa, Ore.
Ruston Fire Dept., Ruston, La.
Williamsport Vol. Fire Co., Williamsport, Md.

VOLUNTEER FIRE COMPANY SECTION MEMBERSHIP

($12.50 annual dues) Eligible:

(1) all bona fide volunteer fire organizations in any community.

(2) all fire departments and companies in communities of less than 25,000 population.

(3) all industrial fire brigades.

Member companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1.25 per year.

Volunteer Fire Company Section members receive at their headquarters, one copy of all pubcations sent to NFPA individual associate members.

INDIVIDUAL ASSOCIATE MEMBERSHIP

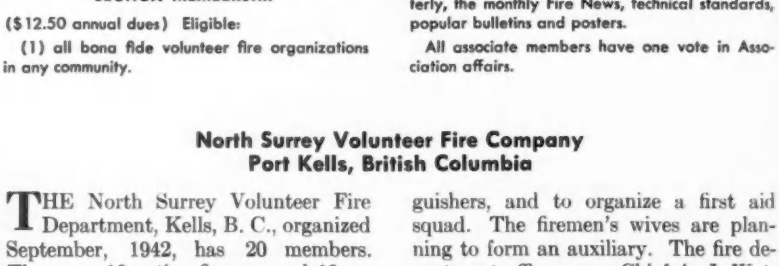
($12.50 annual dues) Eligible:

Individual fire departments, officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA Quarterly, the monthly Fire News, technical standards, popular bulletins and posters.

All associate members have one vote in Association affairs.

North Surrey Volunteer Fire Company
Port Kells, British Columbia

THE North Surrey Volunteer Fire Department, Kells, B. C., organized September, 1942, has 20 members. There are 10 active firemen and 10 reserve men. The department protects 2,500 persons living in a 20 square mile area. The department has an Air Force crash truck a hose and chemical truck, and a 150 gpm Bickle pumper. It is planned to purchase a panel truck carrying first aid equipment and extinguishers, and to organize a first aid squad. The firemen's wives are planning to form an auxiliary. The fire department officers are: Chief A. J. Watson, Asst. Chief E. J. Bullman, President H. Bishop, and Secretary W. T. Davies. During the summer, weekly meetings were devoted to construction of the new fire hall by voluntary labor under the direction of a paid carpenter as foreman.



Sketch by volunteer fireman Bill Davies of the two story, 30 x 40 ft. North Surrey firehall being constructed by volunteer labor under Dan Closkey. The volunteers are taking motion pictures of the project. The building will house three trucks, office, caretaker's rooms, clubroom.

Elevator Saved by Rexalarm and Good Firefighting

Rexalarm is a simple arrangement of fusible links with switch and siren designed to detect and give warning of fire in elevator cupolas, basements or other enclosed areas. It has been developed by the Mill Mutual Fire Prevention Bureau and the Grain Dealers National Mutual Fire Insurance Company (Members NFPA) A typical system was illustrated on page 11 of the October 1947 issue of FIREMEN. *The following account is reprinted from "Our Paper," July 1949, published by Grain Dealers National Mutual Fire Insurance Company.*

ABOUT 5 o'clock in the afternoon of July 5 employees of the Farmers Grain Company at Union City, Oklahoma, were startled by the shrill wail of their Rexalarm siren. In fact, they were so startled for the moment they didn't know what to do.

Joe Ross, maintenance man for the elevator, who was at his home two blocks distant, knew it meant a fire in the cupola so he rushed to the plant and immediately closed the driveway doors. Jim E. Smith, owner of the elevator, was out in town. Hearing the siren he jumped into his car and reached the plant at about the time Joe Ross closed the doors. Jim called instructions to an employee to phone the fire department at El Reno and made for the cupola where he found a lively little fire getting under way.

Going into action with the first aid equipment which he had provided for just such a contingency, Jim had the fire well under control when the rural truck arrived from El Reno, having made the 10-mile run in 13 minutes.

Assistant Chief Don Eagle, who was in charge of the truck, went to the cupola, hoisted a line up the outside of the building and within a short time the blaze was extinguished. A small smouldering fire was discovered several hours later by watchmen who were kept on the job for two nights.

Without, in the least, discounting the excellent handling of every detail of this emergency which limited the actual loss to $300, there is no question but that damage to this elevator and the 37,000 bushels of wheat in storage would have been very heavy had not the Rexalarm been on the job.

Had the fire gotten much of a start, it simply could not have been handled. The town of Union City has no water supply or fire department and notwithstanding El Reno's excellent cooperation their truck carried only 150 gallons of water, which amount would have been useless on a fire of any proportions.

Jim Smith readily admits that when he installed the Rexalarm a few months ago he considered it something of a "gadget" and didn't regard it seriously as being of much value. But now he is for it 100 per cent.

●

Michigan Fire Protection Conference

A GOVERNOR'S Fire Protection Conference is schedule to be held in the Civic Auditorium, Grand Rapids, October 22, 1949. Governor G. Mennen Williams is Honorary Chairman of the program. The General Chairman is Mr. Glenn E. Thom, President of the Detroit Fire Fighters Association and the Executive Director of the conference is Mr. W. O. Hildebrand, Secretary-Manager of the Michigan Association of Insurance Agents. The conference program and arrangements are in charge of Mr. George T. Slocum, Vice President of the International Association of Fire Fighters, Grand Rapids. Nine conference committees are working on various phases of a statewide fire prevention program.

●

Papers of Fire Department Instructors Conference Published

Papers Presented at the Twenty-first Annual Fire Department Instructors Conference. January 11-14, 1949, held at Memphis, Tenn. Included among the papers are "The Fire Picture Today" by Percy Bugbee, General Manager, National Fire Protection Association; "Fire Protection Outside Corporate Limits," by R. C. Loughead, Chief Engineer, Michigan Inspection Bureau; "Training in A Large City," by Wm. S. Allison, Chief, Detroit Fire Department; "Fundamentals of Preparedness in Fire Fighting," by Paul P. Heinz, Chief, New Haven, Conn., Fire Department; "Building Collapse and The Fire Department," by John J. Ahern, Director, Department of Fire Prevention and Safety Engineering, Illinois Institute of Technology; "Fighting Liquified Petroleum Gas Fires," by H. R. Brayton, Director Texas Firemen's Training School; "Television and the Firemen," by Norman H. Davis, Jr., Assistant Secretary, Underwriters' Laboratories, Inc. Also included is a panel presentation of "Radio in the Fire Service." This pamphlet has been published and distributed by The International Association of Fire Chiefs.

SALESMEN WANTED

Fyr-Fyter offers you a Steady Income Selling FIRE EXTINGUISHERS to Homes and Business

- No overnight traveling
- No billing or delivering
- No inventory needed

Yes, you'll look far before you find a finer opportunity for building a business of your own. Hundreds of prospects. The finest fire extinguisher line of them all . . . Underwriters' approved. Whether you're old or young, you can be your own boss and have a permanent, steady income.

Free Booklet

Write letter, giving age, experience, etc. Get this booklet describing the famous Fyr-Fyter sales plan, how you earn while you learn, how Fyr-Fyter helps you sell, etc. If you are willing to gamble 3c on a brilliant future, write today.

Fyr-Fyter

248 Crane St., Dayton 1, Ohio

CAN PAY for ITSELF IN 6 MONTHS

By eliminating Dry Batteries

5" TRUE parabolic, silver plated reflector; 25,000 c.p. beam; ⅓ mile range; sturdy metal case; corrosion proof terminals

Only 72 ounces

Will not spill in ANY position

Battery change in 10 seconds without returning to factory

NON-SPILLABLE RECHARGEABLE

Type G-23

MASTER-LIGHT

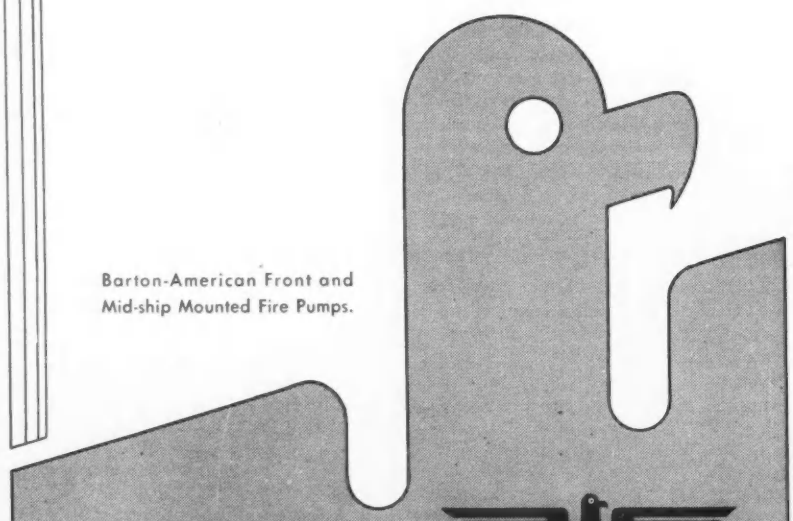
for FIREMEN POLICE and WATCHMEN

Write for new Emergency Lighting Bulletin

CARPENTER LIGHTS

168 MASTER-LIGHT BLDG. BOSTON - 45 - SOMERVILLE, MASS.

for the finest in fire pumps



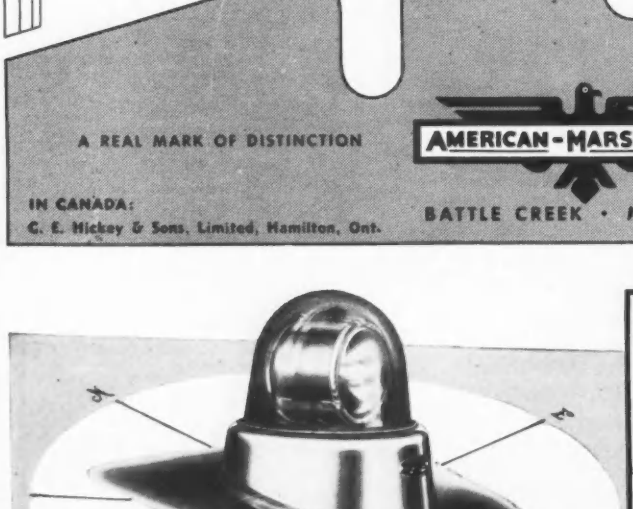
Barton-American Front and Mid-ship Mounted Fire Pumps.

A REAL MARK OF DISTINCTION

AMERICAN-MARSH PUMPS

IN CANADA:
C. E. Hickey & Sons, Limited, Hamilton, Ont.

BATTLE CREEK • MICHIGAN



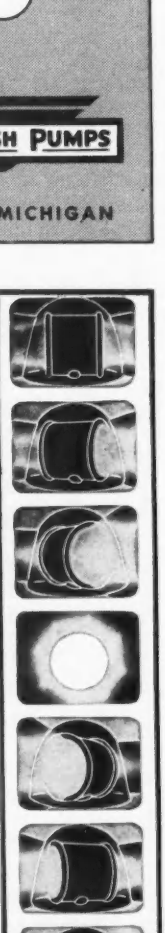
Beacon Ray Light

Eclipses ALL OTHER WARNING LIGHTS!

Don't be content with ordinary warning light protection, danger may lurk at any point of the compass. Protect all-the-way with Beacon Ray.

Only Beacon Ray gives all-around 360° protection, not just front end or front and rear protection, but full 360° front, sides and rear.

Reliable, longer lasting, due to superior design which has eliminated oscillating parts. Totally enclosed from weather influences—seals working parts from sleet, snow, rain, dust and mud. All moving parts of Beacon Ray are inside.



Specify BEACON RAY LIGHT AND FEDERAL COASTER SIRENS ON ALL *NEW* APPARATUS!

FEDERAL ENTERPRISES, INC.

formerly: FEDERAL ELECTRIC COMPANY, INC.

8717 SOUTH STATE STREET CHICAGO 19, ILLINOIS

Disposal of Oil Spills

By Robert S. Moulton
NFPA Technical Secretary

Many fire chiefs have registered concern over gasoline spills and the following is a reply to one fire chief that is concerned with the spillage of gasoline at gasoline filling stations during unloading operations, the disposal of gasoline at marine terminals in case of a ruptured tank, and disposal of gasoline in a tank truck accident. The superintendent of the sewage disposal plant had complained of the method of flushing it into the sewage system.

THERE is no 100 percent satisfactory answer to the problem of gasoline spills. In the first place, any material spillage at service stations, either in filling underground tanks from tank trucks or in servicing automobiles, should be considered as evidence of incompetent operation and in the case of repeated offenders it would seem appropriate to revoke licenses to operate.

Flushing spilled gasoline down sewers is a rather common practice. It is obviously undesirable and creates a fire and explosion hazard in the sewer, as well as making trouble in the sewage disposal plant. The usual reasoning is that the hazard to the sewer is less of a menace to public safety than the extreme hazard of leaving the gasoline on the ground to evaporate. Where there is a separate storm water sewer not connected to a sewage disposal plant, the situation may, perhaps, be slightly less serious than where all storm water drainage goes through the regular sewage disposal plant.

There are methods which can be used to deal with gasoline spills other than flushing the gasoline down the sewer. If the quantity spilled is not large, it can be absorbed by some oil absorbent material and then shoveled up and carted away. Sand is sometimes used for this purpose, but it is not very efficient owing to the limited absorptive capacity of the sand. Sawdust is also used, but this is not effective unless it is dry and gasoline-soaked sawdust itself constitutes a considerable fire hazard. There are some oil absorbent materials particularly made for this purpose which should be more satisfactory than either sand or sawdust although necessarily more expensive.

If the quantity spilled is at all large, the best method may be to remove it by using a special pump. Some of the oil companies have such equipment designed for pumping out tanks.

Any method of removal of a gasoline spill by means of absorbing or pumping will necessarily involve some delay during which there is an ever-present danger of ignition of the gasoline. Backing up a truck of sand, for example, might in itself ignite the gasoline owing

to some spark from the truck exhaust. This danger could be minimized by covering the gasoline spill with foam as a protective measure pending the arrival of the disposal equipment. All this might be rather expensive and would be considered somewhat outside the field of ordinary fire department operations. It might, therefore, be reasonable to expect the oil company involved to cover the extra cost.

The above comments relative to spills around service stations would also apply to gasoline in the street which has leaked from a tank truck. Of course, if the tank truck is continuing to leak it should be removed from the vicinity as promptly as possible or the gasoline eliminated by transferring to another empty truck. All such operations necessarily involve the danger of ignition of gasoline and would have to be handled with great caution. All spectators should be kept away from the vicinity and every possible precaution taken to prevent any source of ignition. Any operation of a motor vehicle, including fire apparatus, in an area where there is a concentration of gasoline fumes might cause ignition. It might be desirable to make some arrangement with your police department so that you will have police assistance in keeping everyone away from the area of the gasoline spill.

Tanks at marine terminals should be diked the same as any other tank to retain any leakage. It is not good practice to have gasoline tanks on piers or wharves built on piles over the water. It is much better to have them on shore and have the delivery to the wharf by pipe. With proper control of valves, this will mean that in case of accident the amount of gasoline discharged on the water will be limited in quantity. If gasoline is discharged on the water, it can be forced away from piers, boats and other property, by the use of hose streams until such time as it has been disposed of by natural evaporation. Here again there is an ever-present danger of ignition and everyone should be kept away from the vicinity.

Belvidere, N. J., Firemen "Pull Fast One"

TWENTY-FIVE motorists swallowed it hook, ladder and sinker. They came roaring after the Belvidere, N. J., Fire Department as the trucks rolled through the town. The engines clanged out to a rural area, cut into a dead end lane and came to a quick stop. The motorists, instead of being met with a fire, were greeted by pads of paper and pencils in the hands of the firemen. Presently, all had their license numbers taken and were warned not to be caught chasing the engines again.

"Churches are Burning"

Attractive and well illustrated, this two color 40-page pamphlet contains an analysis of 300 church fires. It has been prepared by the NFPA to guide church officials and others charged with the duty of protecting churches from fire.

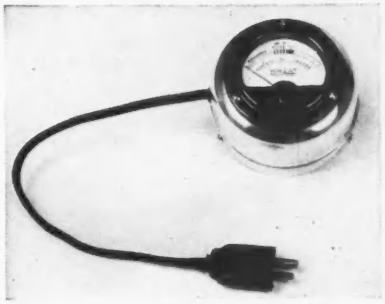
Copies are available at $1.00 each.

"Protecting Our Heritage"

This attractive 30-page pamphlet stresses the use of automatic protection and fire detection systems for libraries, museums and historic buildings. It is written for people interested in safeguarding valuable manuscripts, books, and irreplacable art objects. Price 50c.

NATIONAL FIRE PROTECTION ASSOCIATION
60 Batterymarch Street
Boston 10, Mass.

. . . . PREVENT LIGHT FAILURES
With the New
WHEAT CHARGE INDICATOR



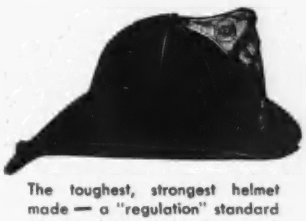
The MODEL 417 **Wheat Charge Indicator** determines in 2 or 3 seconds the exact state of battery charge. In the form of a meter it is simply plugged into charging socket of Wheat Light without opening or taking apart.

FOR GREATER SAFETY AND EFFICIENCY ORDER THE NEW WHEAT CHARGE INDICATOR FOR YOUR WHEAT LIGHT TODAY. FOR INFORMATION ON THE NEW WHEAT FIREMAN'S SPOTLIGHT CONSULT YOUR DEALER or write

KOEHLER MFG. COMPANY
MARLBORO, MASS., U. S. A.
When ordering Apparatus: *specify* WHEAT LAMPS

CAIRNS
LEATHER HELMETS

THE "NEW YORKER"



The toughest, strongest helmet made — a "regulation" standard wherever leather helmets are used.

THE "SEAMLESS"

One-piece seamless leather crown, steel-reinforced — in "regulation" or drop-brim style.

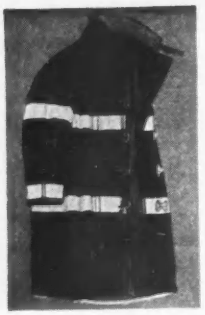
Protection, comfort, durability — these are what every fireman wants in a helmet. Generations of firemen, the country over, have found by actual experience that CAIRNS LEATHER HELMETS give them the utmost in all three of these essential features. There's a style to meet every preference, and a shape for every head.

Write for Catalog 330

CAIRNS & BRO., Inc.
(ALLWOOD), CLIFTON, N. J.

Outfitters to Firemen Since 1836

Time to Order
WINTER EQUIPMENT
Warm, waterproof turn-out coats and trousers — felt-lined boots — extra heavy wool mittens — flannel shirts — fleece-lined rubber coats—face shields. Early orders mean early delivery.



The Original MIDWESTERN Yellow Striped Safety Coat Is Again Available . . .

for Men of Action!

Here's Protection and Comfort in Your Hazardous Work of Safeguarding Life and Property Against FIRE!

Modern fire fighting calls for *specialized* protective clothing . . . clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of crude rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility in the high-grade materials used are your assurance of long time service and comfort. Many Fire Chiefs are now including Midwestern clothing in their regular yearly budget and by placing your order early you can be assured of this adequate protection when needed.

For complete information have your Midwestern dealer show you our new garments now manufactured from crude rubber compounds. A letter to the factory will also bring you material samples for your inspection.

We now have available: White, Ivory and Brown crude rubber coats for Chiefs, Assistants and other officers; also all sizes short and ¾ length felt lined Firemen's boots for immediate shipment.

MIDWESTERN MFG. CO. MACKINAW ILLINOIS

Manufacturers of the Famous MACKINAW Coats

You know how to operate this extinguisher JUST BY LOOKING AT IT!

Simple, *obvious* operation makes the Randolph really panic-proof—gets it into action *before* the fire spreads—kills fire instantly with a snowy cloud of CO_2! No valves to turn, no nozzles to adjust; just point and press your thumb! Randolph CO_2 is non-damaging, evaporates without a trace. It's non-toxic, won't conduct electricity, deteriorate or freeze. UNDERWRITERS' APPROVED.

Learn how Randolph gives your plant better *preventive* fire protection! Write or wire:

RANDOLPH LABORATORIES, INC.

5 EAST KINZIE STREET • CHICAGO 11, ILLINOIS

Ten Years of Progress in Rebuilding A Great Fire Department

Continued from page 12

Some of the forms used in our training program are as follows:

1. An instructor work sheet including ratings or markings for each fireman or some 23 fire department subjects, including the use of various fire department tools and evolutions, and covering such subjects as drafting water, relaying water, using gas masks, discipline and leadership.
2. An individual record card for each member giving various company assignments and gradings on such subjects as leadership and discipline.
3. A permanent record sheet indicating individual and fire company performance on each training subject compiled by the Division of Fire Instruction and kept in a permanent binder. This gives performance both for individuals and for each shift of each company.
4. A daily assignment sheet for the training school giving the performance of officers and each member in each of four evolutions and covering individual leadership and discipline.
5. A fire company training report made by the fire company officer conducting the fire company training session covering each unit taught. This is forwarded through channels to the Training School so that it has a record of fire company instruction.
6. An observation test sheet to check each fire company's knowledge of hydraulics as demonstrated by three actual layouts for 2½ in. hose and two for 1½ in. leader lines, with the nozzle and pump pressures checked by gages.
7. A first aid report covering service at accidents.
8. Annual pump test sheet.
9. Annual hose test sheet.

Since July 1940, our training school has put through 1204 new men. At that time our personnel numbered 540, today we have 557 members.

★ ★ ★

In Philadelphia Its The "Bernard Samuel"

Continued from page 17

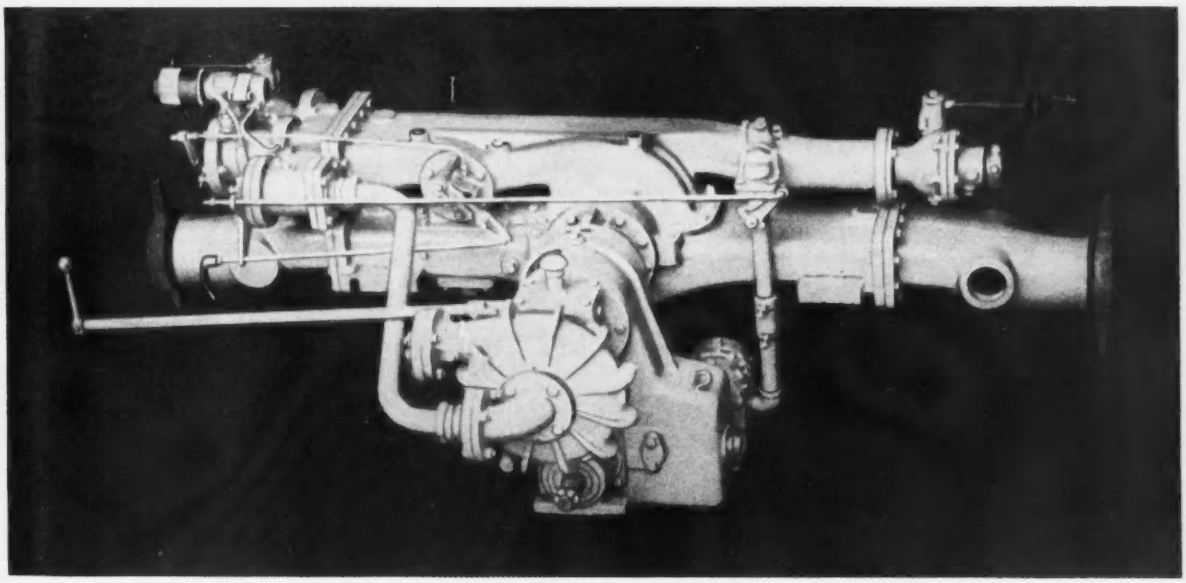
During acceptance tests, the ships four pumps showed a combined capacity of 6,158 gpm at 150 pounds, when operated individually. With all pumps performing simultaneously, 5878 gpm at 150 pounds was delivered through six 2 in. nozzles.

The *Bernard Samuel* was placed in service for less than $200,000 or about one quarter of the cost of some previously constructed fire boats. This summer the Philadelphia City Council voted $330,000 for replacement of the remaining two steam fireboats with modern Diesel operated vessels.

In Steady Demand!

HALE TYPE HPZL

- HIGH PRESSURE FOG: at 600 lbs.; 60 to 150 GPM
- UNDERWRITERS' RATING: at 120 to 150 lbs.; 500 and 600 GPM



From its formal announcement in 1948 a steady demand for the HALE Type HPZL has proved that it meets well the need for an *amidship* pump that combines standard Underwriters' performance with High Pressure Fog.

FEATURES

- **High pressure performance. Provides 600 to 700 lbs. pressure for use wherever High Pressure Fog is effective.**
- **Flexibility and Safety Reserve. Pumps 500 to 600 GPM at Underwriters' ratings with ample reserve capacity.**
- **Takes full advantage of hydrant pressure. Handles capacities, on a good hydrant, far above its rating and at reasonable motor speeds, with non-pulsating, uniform delivery.**
- **Combines three stage in ONE AMIDSHIP PUMP for wide performance range.**
- **HALE Positive Displacement Priming System — primes higher and faster.**
- **Equipped with HALE ball-type "BL" Discharge Valves.**
- **Sold only through makers of Quality Apparatus.**

For Complete Details Write —

HALE FIRE PUMP COMPANY

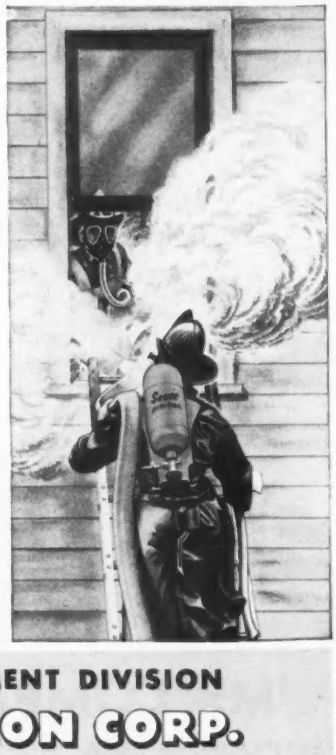
CONSHOHOCKEN, PA.

Founded 1915 **Cable "Haleco"**

HALE FIRE PUMPS are built in all STANDARD CAPACITIES

DRAMATIC RESCUE
in Woonsocket, R.I.
Tenement Fire-
with Scott Air-Pak
playing a leading part
FIRE BREAKS OUT AT 2 A.M. IN TENEMENT ROOMS WHERE THREE UNATTENDED CHILDREN ARE SLEEPING—
2 CHILDREN ARE RESCUED. THEN — BUT LET THE LOCAL PAPER TELL THE STORY:
"The third and most daring rescue was effected by Ralph Lauzon, fire chief's chauffeur. "Wearing a Scott 'Air-Pak', a new piece of equipment, Lauzon groped through the dense smoke .. traced the child by her moaning, finding her unconcious on the floor . . . carried her out."
". . . She was given first aid in the department's rescue truck en route to the hospital. Her condition was reported as poor because of smoke inhalation, when she was admitted, but was reported considerably improved at noon."
From the Woonsocket R. I. "Call" June 11th, 1949

Victims rescued—fires put out with minimum property loss—that's the story of fighting fires with the aid of Scott *Air-Pak* Safety Breathing Equipment. Quickly put in use when smoke or fumes create a breathing hazard, Scott *Air-Paks* get firemen off to a fast start in rescue work, or in effective control of a fire at its source. An ample supply of cool, confidence-inspiring *air* (not oxygen) with *Air-Pak* helps "keep things moving" at top efficiency throughout.



Write for full details!

Get the full story of Scott Air-Pak equipment, and FREE DEMONSTRATION if desired. Write for *Bulletin* 510 and name of nearest distributor — today!

ESTABLISHED IN 1932
Scott
FOR SAFETY—FOR SERVICE

SAFETY EQUIPMENT DIVISION
SCOTT AVIATION CORP.
236 ERIE ST. LANCASTER, N. Y.
In Canada: Safety Supply Company, Toronto, Ont.

Radioactive Isotopes and Canadian Fire Departments

RADIOACTIVE isotopes are now being shipped by the Atomic Energy Project of the National Research Council at Chalk River, Ontario, to research laboratories and industry in Canada. In their radiation effect, these radioactive isotopes are quite similar to radium or x-ray machines. These radioactive materials are shipped in special protective containers, and present no hazard in any form to the public when transported, stored and used in these containers and in accordance with the detailed directions which are given to all shippers and users.

While none of these radioactive isotopes can start or contribute materially to a fire, under certain circumstances it is possible that their safety containers, usually of aluminum and lead, might be damaged in a fire by either the fire itself or by mechanical causes arising out of the fire, such as falling beams, etc., which might rupture the protective case.

Dangerous radiation cannot be seen or felt by persons in the danger area, and can only be detected by rather complicated instruments handled by trained technical personnel. Some of the radioactive isotopes, if they do get outside their safety containers, are burnable and do not lose their radioactive effects when converted to gas or ashes, so that unless and until they are very finely dispersed they present a serious hazard if taken into the stomach, lungs or blood stream or if they are lodged on clothing and carried away by the fire fighters. On the other hand, each individual person has a considerable tolerance against the effects of radiation so long as he is not exposed too long. Further, the hazards of radiation decrease rapidly with distance, and some substances which might be very harmful if handled or carried about by a fire fighter present a very little danger as long as the fire fighter keeps some feet away or behind a concrete or masonry wall and does not remain too long in the immediate vicinity.

Following discussions and arrangements between the National Research Council and the Assn. of Canadian Fire Marshals, a plan has been in effect since July 1, 1949, under which the National Research Council is notifying each provincial fire marshal of any shipments to his province of radioactive isotopes in quantities which might be potentially dangerous to fire fighters called to fight a fire in any premises in which these substances are used or stored. Also very detailed instructions for procedures to be followed in any fire fighting in such premises have been worked out jointly by the National Research Council, the Ontario Dept. of Health and the Ontario Fire Marshal's

Office, which are being distributed to all fire chiefs to whose municipalities "dangerous" shipments of radioactive isotopes are made. All Ontario fire chiefs to whose municipalities such shipments have been made to date have been notified by the Fire Marshal and the names given of the firms or individuals receiving them. This procedure will be followed for further shipments of radioactive isotopes in dangerous quantities and to each fire chief concerned a copy of the detailed instructions will be forwarded. The Atomic Energy Division of the National Research Council and the Ontario Dept. of Health are of the opinion that if the procedures established in the circular are followed exactly by the fire chiefs and fire fighters it would be extremely unlikely that there would be any threat to the health or life of fire fighters called upon to fight fires in which radioactive isotopes were involved. The Fire Marshal's Office and the municipal fire chiefs with whom this problem has been discussed, are also of the opinion that the procedures established provide all reasonable precautions that might be taken to protect fire fighters.

—from Ontario Fire Marshal's "Bulletin"

Luck in "Promotion"

by Charles J. Fleming

"LUCK," has a wide variety of definitions. And since men attribute to the word such diverse meanings, it is only natural that a great many things are said to hinge upon whether or not we are lucky.

Of course if you run through the standpipe laws the evening before, and the test you take features such a law, the boys are bound to say that you were lucky. If you devote your time mastering hydraulics until there is no problem that will stump you, and Civil Service, without notice, forgets there is such a subject the boys will concede that you were out of luck.

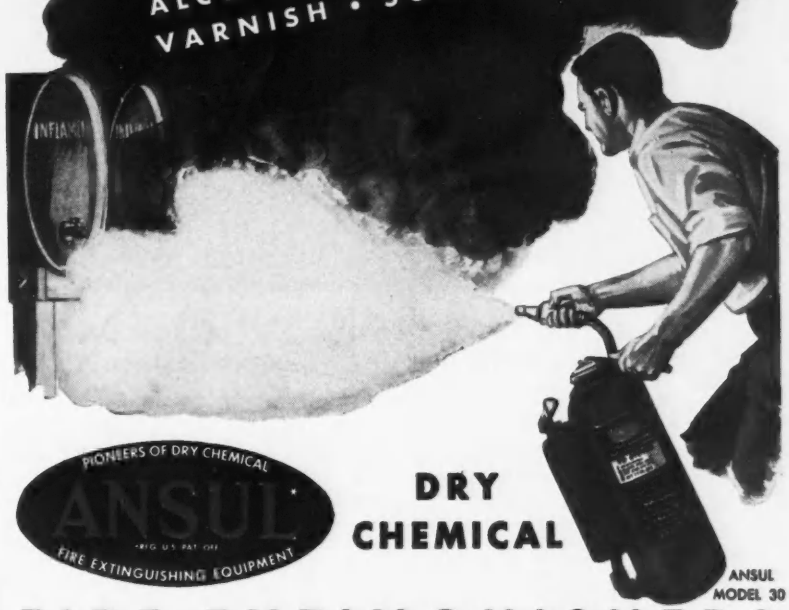
But while you are at it, taking liberties with definitions, why not shape them to suit? Why not say "luck' means the hardships and privations that you have not hesitated to endure, the long nights you have devoted to careful study. Let "luck" mean the classes you have never failed to keep, the books you scanned, the patience you never lost. Let "luck" be courage when it is needed and thoroughness, and the ability to weed out the useless from the useful. Subtract it from the tendency to sit by idly, waiting for all good things to come with little effort.

While this may not be exactly the answer, let "luck" include some of these attributes of a first-class fireman-student and I will tell you my opinion frankly: getting ahead, no doubt about it, is 99 per cent luck.

Boston Firefighters Digest, Aug. 1949

FOR FLAMMABLE LIQUID FIRES

GASOLINE • NAPTHA • BENZENE
ALCOHOL • LACQUER • PAINT
VARNISH • SOLVENTS • ETC.



PIONEERS OF DRY CHEMICAL
ANSUL
FIRE EXTINGUISHING EQUIPMENT

DRY CHEMICAL

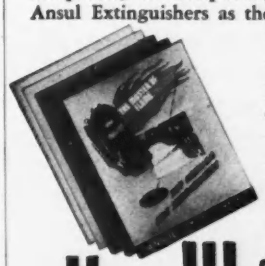
ANSUL MODEL 30

FIRE EXTINGUISHERS ARE YOUR *BEST* PROTECTION

...and most economical, too! Tests conducted by impartial, nationally recognized approval laboratories have proved the superiority of Ansul Dry Chemical Fire Extinguishers on *Flammable Liquid Fires.*

In addition, Ansul Fire Extinguishers provide greater safety for the operator. The stream of Ansul Dry Chemical forms a protective screen safeguarding him against radiant heat.

More and more industrial plants, transportation companies, oil companies, etc. are switching to Ansul Extinguishers as their first line of fire defense. There is a reason.



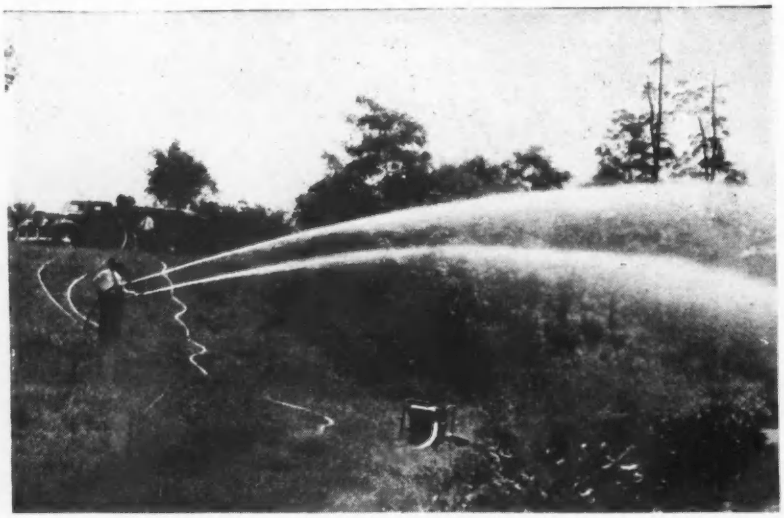
Get the facts. Send for your copy of File No. 405. You'll also receive our latest literature together with comparative rating charts for the various types of fire extinguishers.

- Safe for use on electrical fires; tool Even high voltages are not conducted by dry chemical stream.
- Can be recharged at many of fire furnishing continuing protection.
- Annual recharging is not necessary. Low maintenance costs.
- Longer range stream of dry chemical is effective in winds and drafts.
- Ansul Dry Chemical is non-abrasive, non-corrosive, non-toxic.
- Listed and Approved by Underwriters Laboratories and Factory Mutual Laboratories.

ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS IN PRINCIPAL CITIES IN THE UNITED STATES, CANADA, AND OTHER COUNTRIES

HALE TYPE FZZ Portable Pumping Unit

● Handy for Re-Laying to Major Pumper



● Compact yet powerful!
● Designed for Fire Fighting

Write Today!

FIR

HALE FIRE PUMP COMPANY
Conshohocken, Pa.

Gentlemen:

☐ Please send us detailed information on the HALE Type FZZ Portable Pumping Unit.

☐ We are interested in a demonstration. (No obligation.)

NAME .....

FIRE COMPANY ..... STATE.....

TOWN ..... Phone No.....

*Check square desired.

Directly above — For 12 hours these two FZZ units supplied water through 650 ft. of 1½" hose to a large pumper fighting a barn fire. At top — Single FZZ relaying to major pumper.

Coming Events

Kansas. The 1949 Annual State Fire School will be held in Wichita, Oct. 24–27.

Missouri. Southwest Missouri Annual Fire School to be held at Springfield, Oct. 18–19.

NFPA REGIONAL MEETINGS

The NFPA is to hold two regional meetings this fall. The first will be the Northeastern Regional Meeting to be held November 1 and 2, 1949 at the Hotel Statler, Buffalo, N. Y.

The second will be the Southeastern Regional Meeting to be held November 29 and 30, 1949 at the Hotel Biltmore, Atlanta, Ga.

These meetings are primarily for members in these d'stricts but are open to any other members interested.

New Text

Fire Hazard Properties of Certain Flammable Liquids, Gases and Volatile Solids

IF during a Fire Prevention Week inspection you came across a container marked "Aminoethylethanolamine," (chemical formula $NH_2C_2H_4NHC_2H_4OH$), would you eat it, beat a safe retreat, or notify the FBI? You need do none of these through fear of the unknown if in your pocket you are carrying the handy 72-page booklet "Fire-Hazard Properties of certain Flammable Liquids, Gases and Volatile Solids" recently issued by NFPA, and available at 75 cents per copy. Not only would this book tell you about Aminoethylethanolamine, its flash point, ignition temperature, specific gravity compared with water, vapor density compared with air, the boiling or vaporizing point, and what extinguishing agent to use in case of fire — it tells all these things and more for some 560 other flammable liquids, gases and volatile solids. Some of these have strange names like Dimethylglycophthalate or Methyldiethanolamine. Others are as familiar as Alcohol, Gasoline, Ether, Olive Oil and Propane. All are arranged in alphabetical order for ready reference.

This booklet, sponsored by the NFPA Committee on Flammable Liquids, is one that no well equipped fire department or fire officer or inspector can afford to be without in these days when strange chemical names are encountered in every community. Unless your memory is phenominal enough to retain the characteristics of every common gas, liquid or volatile solid that burns, we believe you will find this little document of real value.

Outside Fire Service

A UNIQUE way of handling outside fire service for the environs of Black Mountain, North Carolina, has been developed by the town's officials. Here is how it works. A volunteer assessment of $3 per year per housing unit is levied on all property owners within five miles of the corporate limits. There is no compulsion to pay, and the property owner may follow the dictates of his heart. On every July 1st, postcards are mailed to every property owner advising that the fire department assessment is due. This has produced some $1,200 per year, and has permitted the town to buy a specially built truck for answering rural calls.

To encourage 100 percent participation in the volunteer assessment, the town charges $100 for answering a fire call to non-participating property owners. The town employs one full-time fireman on 12-hour duty, and a member of the police departments serves as driver.

National Electrical Code 1949

THE National Fire Protection Association has announced the availability of the 1949 printing of the National Electrical Code, published as Volume V of the National Fire Codes. This code provides for the practical safeguarding of persons and buildings and their contents from electrical hazards arising from the use of electricity for light, heat, power, radio, signalling and other purposes.

All amendments adopted at the NFPA 1949 Annual Meeting are clearly marked to show where changes appear. All official interpretations to June 1, 1949, printed as footnotes, are included under the code paragraphs to which they apply.

An index to electrical provisions of other fire protection standards useful for reference in connection with the application of the Code to special occupancies is also included.

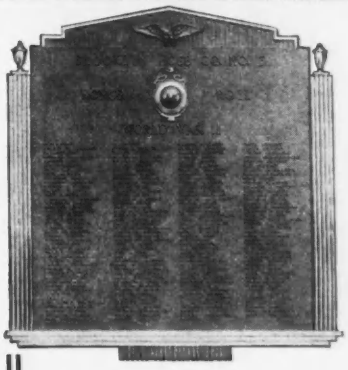
Attractively bound in a 6 x 9-in. red cloth binding, this volume is printed in large easy-to-read type. It is available from the NFPA Executive Office, 60 Batterymarch St., Boston 10, Mass., at $3.00 per copy.

Iowa State Short Course

A FOUR-DAY Short Course is on schedule on the campus of the Iowa State College, October 18 through 21. This course is being given for Fire Prevention Bureau Personnel of paid Iowa Fire Departments. A technical program has been arranged which will include Sanborn Maps as significant to the fire inspector, sprinkler system inspections, electrical hazards, fire resistive ratings and classifications, and similar items.

FOLDING CHAIRS
IN STEEL OR WOOD

Priced from $1.89 EACH *Upward*
SHIPPED DIRECT FROM THE FACTORY
Write for complete catalog
J. P. Redington & Co.
Dept. 97, Scranton 2, Pa.



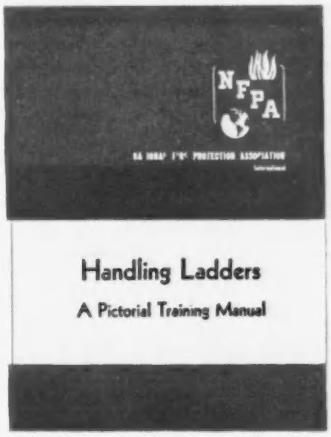
Emblazon Their Names in
LASTING BRONZE

MEMORIALIZE your Department heroes for all time on these handsome tablets, executed to individual requirements — of hand-chased cast bronze by NEWMAN.

CATALOG OF TABLETS
In colors, also folders of World War II honor rolls, sent on request, without any obligation.
WRITE TODAY

NEWMAN BROTHERS, Inc.
Dept. F Cincinnati 3, Ohio

"Handling Ladders" First Manual of Joint Committee on Evolutions



Published by the National Fire Protection Association

Approved by:
NFPA Committee on Firemen's Training
International Association of Fire Chiefs
Fire Department Instructors Conference

The Joint Committee on Evolutions first manual, "Handling Ladders" contains some 231 large photographs in its 120 pages. It is available from the NFPA executive office, 60 Batterymarch St., Boston, Mass., for $1.50 per single copy or $1.00 per copy in quantities of 10 or more.

Luverne

COMPLETE FIRE TRUCKS

Are Stocked for
Immediate Delivery

500 and 200 gallon Pumpers

BUILT ON INTERNATIONAL CHEVROLET AND FORD TRUCKS

For details and quotations see any Truck Dealer or write to

LUVERNE FIRE APPARATUS CO.
Luverne, Minnesota

Manufacturers of Fire Truck Equipment
Since 1912

FIREMEN'S UNIFORMS

SHIRTS
BADGES
CAPS
INSIGNIA
RUBBER COATS

Manufacturers of Uniforms for over 50 years

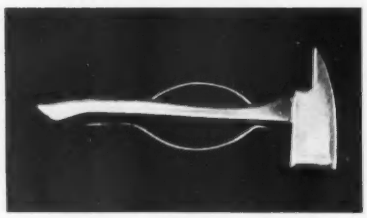
Official Makers of Uniforms for New York City Fire and Police Departments, and Serving Other Departments from Coast to Coast.

RUSSELL UNIFORM CO.
192 Lexington, New York 16, N. Y.
Write for Fire Dept. catalog H-60

MANUFACTURERS' ANNOUNCEMENTS

"A Tie Klip Made by a Fireman for the Fireman"

MANY firemen from all parts of the country have asked, upon seeing the "Axe of Recognition Tie Klip," "Just where can I get one like it?"

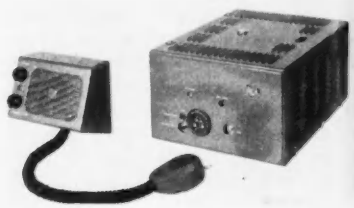


In the September 1948 FIREMEN, a brief notice was printed picturing this tie clip and it is now repeated. It was conceived by and manufactured by Roy Kirkpatrick and Raymond E. Klemm, both of the Saginaw, Michigan, Fire Department. Because of the great demand for the clip, in their own department and others, they decided to make them on a production basis. They are available from Mr. Klemm at $1.50 each. Address: 209 South 16th St., Saginaw, Michigan.

RCA Two-Way Mobile Radio for Low Frequency Operation

THE Fleetfone, a highly-selective two-way mobile communication system for operation in the 30-50 megacycle band, was announced by the Communications Section of the Radio Corporation of America Engineering Products Department. It is designed for such services as police, fire, protection, forestry, public utilities, transportation, and others which are licensed for operation in the lower frequency band.

The Fleetfone radio transmitter-receiver is completely contained in a single metal shielded unit which permits mounting the equipment in practically any position, on either a horizontal or a vertical surface. The controls and loud-



speaker are combined in a single compact unit for attachment under the dashboard.

Esso Tankers Equipped with Kidde Carbon Dioxide Systems

TEN super tankers soon to be completed by the Newport New Shipbuilding & Dry Dock Co. for the Standard Oil Co. of New Jersey will be equipped with Kidde carbon dioxide fire extinguishing systems. Protected spaces on these 26,800 ton, 628 ft. tankers will include boiler rooms, cargo oil pump rooms, main propulsion and auxiliary engine rooms, and the emergency generator room. The systems are supplied by fifty-one 50-pound capacity cylinders of CO_2. An automatic time delay allows evacuation of crew from fire area before discharge starts. All cylinder controls are totally enclosed. In case of fire in any of the protected spaces, directional valves will control the flow of the released carbon dioxide. The first control location is aft, on the port side of the upper deck with four directional valves and a release for the storage cylinders. The second, on the walkway between the bridge and the poop, contains handles for remote control of the directional valves.

One of the highlights of the recent Southeast Michigan Fire Chief's Association was a visit to the Kaiser-Frazer plant at Willow Run, Mich. There they were shown one of the latest pieces of fire equipment. This new piece is a combination fire chief's car and an emergency ambulance. As shown in above, this Kaiser "Vagabond" car has a full rear end opening, with capacity for hospital stretchers and rescue equipment, with the result that an emergency ambulance attends every fire with the fire chief. Some of the visiting chiefs are shown at the rear.

John Bean High-Pressure Service ladder truck. 5-ton chassis; 60 G.P.M., 850 lbs. high-pressure pump; 2 hose lines with guns discharging 30 gals. each; 400-gal. water tank; assorted ladders up to 45 feet.

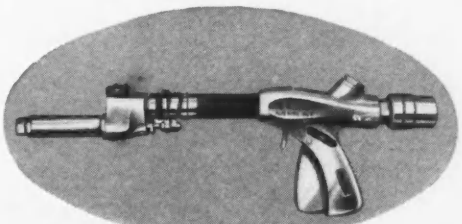
1000 fire chiefs can't be wrong!

More than 1000 fire chiefs are using John Bean High-Pressure Fog Fire Fighters for *first line fire fighting.* Their success and results are substantial proof of every Bean claim.

ONLY BEAN DOES THE COMPLETE JOB

John Bean Fog Fire Fighters . . .

1. **Go into action immediately on arrival**
2. **Eliminate almost all water damage**
3. **Require less than 10% as much water**
4. **Operate simply, both at truck and fire**
5. **Last longer because they are built complete in the Bean factory by experienced high-pressure engineers**
6. **Provide positive displacement slow-speed pump and slow engine speed. No destructive racing of engine**
7. **Carry the patented Bean Fog Gun, unquestioned for superiority in design and efficiency**



THE PATENTED BEAN FOG GUN. Operated at high water pressure, it gives every type of fog pattern for fire fighting. One man can operate it easily.

BEAN *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY AND CHEMICAL CORPORATION

JOHN BEAN DIVISION, DEPT. 127, LANSING 4, MICH. • JOHN BEAN DIVISION (WESTERN), 426 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

TURN YOUR "DAYS OFF" INTO EXTRA INCOME!

(in a business you know)

Sell RANDOLPH Extinguishers

$84 A WEEK FROM 2 SALES A DAY.

You can earn "extra" income easily, *in a business you already know*, by selling Randolph CO_2 Extinguishers to factories, homes, garages and hundreds of other prospects. Read our ad on page 22 and then write for the plan that's earning big money for firemen and fire officials all over the country. WRITE TODAY!

SEE PAGE 22

RANDOLPH LABORATORIES, INC.

5 E. KINZIE STREET

CHICAGO 11, ILLINOIS

INDEX TO ADVERTISERS

American-LaFrance Foamite Corp.	32
American-Marsh Pumps, Inc.	20
Ansul Chemical Co.	25
Beacon Falls Rubber Footwear	5
John Bean Mfg. Co.	29
Cairns & Brother	21
Carpenter Mfg. Co.	19
The Circul-Air Corp.	18
C-O-Two Fire Equipment Co.	14
W. S. Darley & Co.	4
Federal Enterprises, Inc.	20
The Fyr-Fyter Co.	19
The Gamewell Co.	2
Hale Fire Pump Co.	23, 26
Koehler Mfg. Co.	21
Luverne Fire Apparatus Co.	28
Mack Mfg. Corp.	6
Metcalf Bros. & Co.	15
Midwestern Mfg. Co.	22
Newman Bros., Inc.	27
Randolph Laboratories, Inc.	22, 30
J. P. Redington & Co.	27
Rockwood Sprinkler Co.	3
Russell Uniform Co.	28
Scott Aviation Co.	24
D. B. Smith & Co.	31

When you write to advertisers, please mention FIREMEN

MANUFACTURERS' ANNOUNCEMENTS

Frost-proof Front Mount Pump

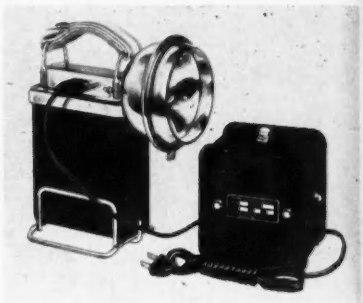
THE American-Marsh Pumps, Inc., of Battle Creek, Mich., has announced their new Barton-American UA-50 front mounted gear driven, centrifugal pump. This pump, developed for high pressure service, meets the full requirements of Underwriters' specifications for normal capacities and pressures. In addition, this pump is said by the manufacturer to be frost-proof. Water is continually by-passed from the engine cooling system, through the cored passage in the suction head of the pump, and back to the cooling system. The water is always at engine temperature and will keep the pump well above the freezing point, even in severe cold weather. As this is a closed system, there is no loss of water or anti-freeze from the radiator. There are no valves in the line to be accidently closed, or become clogged. This pump is designed to deliver two or more high pressure fog or straight stream lines.

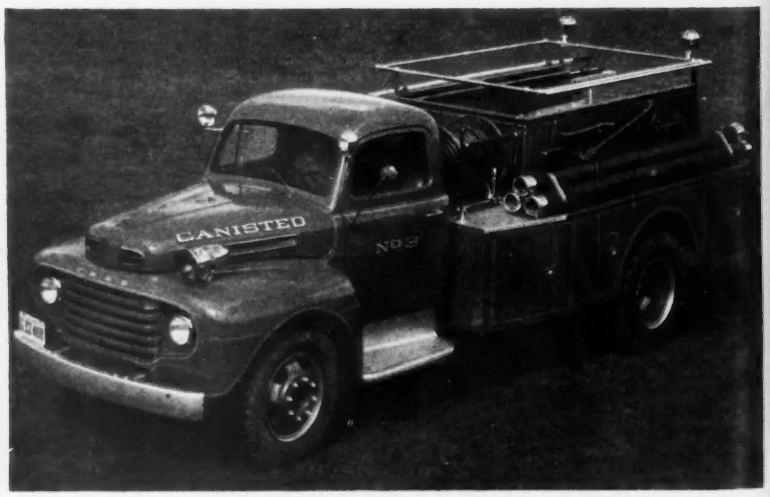
New Film Available

A NEW film has been announced by the Grinnel Company, Inc. of Providence, R. I. It is available for free showing before engineering groups, fire departments, fire protection organizations, schools, oil refinery executives and other interested persons. Entitled, "Emulsion Extinguishment of Oil Fires with Water Spray," this 16 mm., sound, full color film presents a complete summary of the extinguishment of oil fires with water. This 20-minute film is available to groups having 16 mm. sound projectors, by writing to General Sales Manager's Office, Attention: K. P. Jones, Grinnell Company, Inc., Provdence, R. I.

New Wheat Firemen's Spotlight

KOEHLER Manufacturing Company of Marlboro, Mass., has introduced a new Wheat Rechargeable Spotlight designed for fire departments. Known as Model 261, this new spotlight is rated at 25,000 candlepower with a half mile light beam. The outer battery casing is made of a new material, Butalite, which is said to have an impact resistance 15 times greater than hard rubber. The casing is molded in red with an all chrome metal top. Also included in the design are windows to indicate the battery solution level, and a waterproof light switch. Of special interest is the 6-volt automotive charger which enables charging from any automobile battery. A charge indicator in the form of a meter has also been developed which is plugged into the charging socket located on the battery top.





The Ward-LaFrance Truck Corp. of Elmira, N. Y., has announced a new line of pumpers built on Ford truck chassis. These are equipped with Waterous pumps in capacities from 200 to 500 gpm, rated at 120 pounds. The 500 gpm pump is a centrifugal pump capable of developing up to 700 pounds pressure in the third stage. Booster tanks come in standard sizes of 300 or 500 gallons for the short wheel base and 700 and 1000 gallons for the longer wheel base. Behind the cab are dual hose reels, each capable of holding 300 ft. of ¾-in. hose. It is stated that the pumper has full ground control and an interlocking shift from cab to ground control makes chassis drive engagement from the pump control station impossible.

Your Chief Means of FIRE PROTECTION—

INDIAN

Fire Pumps

The leading means of extinguishing inside and outside fires is by use of portable, highly efficient *INDIANS*—the back pack fire pumps that do the job fast and do it right. You'll be amazed at how much fire can be put out with the 5-gallons of water the tank holds.

Perhaps you are now equipped with *INDIANS* and realize what they can do. If so, we suggest you check over your supply to be sure you have plenty for the fire season. If you are not familiar with *INDIAN FIRE PUMPS* and would like to know more about them write us—we will send you our catalog and full information.

Properly formulated wetting agents may be effectively used in *INDIAN FIRE PUMPS* including galvanized tanks now coated on the inside with asphaltic base paint and brass and chrome plated tanks.

D. B. SMITH & CO. 410 MAIN STREET UTICA 2, N. Y.

Hercules Equipment & Rubber Co. 435 Brannan St. San Francisco, Calif.
Roy G. Davis Co. 7 East 3rd Street Los Angeles 13, Calif.
Mill & Mine Supply Co. 2700 Fourth Ave. Seattle, Wash.
Fred E. Barnett Co. 600 Spring St. Klamath Falls, Oregon
Fred E. Barnett Co. 2005 S. E. 8th Ave. Portland, Oregon

CANADIAN AGENTS:
Bingham & Hobbs Equip. Co. 395 W. 5th Ave. Vancouver, Canada
Duke Equipment 297 Duke St. Montreal 5, Canada

ALFCO FIRE EXTINGUISHERS KILL ALL TYPES OF BLAZES

For any blaze which a portable unit can extinguish, American-LaFrance-Foamite has the right fire extinguisher — expertly designed and ruggedly constructed for long life and efficient service. From the No. 0 1-qt. Fire-Gun to the 2½-gal. Foamite Model 5F-FD-1 or the new Alfco Model 30 Dry Chemical unit, the famous Alfco line of fire protection equipment meets the most rigorous tests of fire-fighting effectiveness in practical use. For complete information on Alfco Fire Extinguishers, consult your nearest American-LaFrance-Foamite representative, or write directly to us.

Above: left, 2½-gal. Foamite Model 5F-FD-1 Extinguisher; center, Alfco Carbon Dioxide Fire Extinguishers—L. to R.: 2½ lbs., 3⅝ lbs., 15 lbs., 20 lbs., 10 lbs., 5 lbs. rated capacities; right, 2½-gal. Model 5S-FD-1 Soda-Acid Extinguisher.

Lower Left: Alfco Model 30 Dry Chemical Fire Extinguisher with special Running Board Bracket.

Lower Right: Alfco Fire-Guns; l. to r., No.0, 1-qt., No. 2, 1½-qt., No. 4 1-gal. Stored Pressure Type.

AMERICAN-LAFRANCE-FOAMITE Corporation

ELMIRA-NEW YORK-U.S.A.

ALFCO

Vision 20/20

XI